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Carcinoma of the Cervix Uteri*

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Marked improvement has been made in clinical results obtained in the treatment of carcinoma of the cervix uteri during the past two decades. At one time fewer than 20 per cent of all patients survived the usual five years. Some recent authors have reported more than 30 per cent of their cases alive and well for the same period. Increase in the survival rate may be due in part to a more favorable type of clinical material. This is to be expected as the result of earlier recognition of cervix cancer by physicians. It is also possible that, due to programs of lay education, patients now investigate suspicious symptoms more promptly. More important than the possible slight increase in favorable cases, however, has been advance in methods of radiological treatment. Many of the advances have been of a technical character related to fundamental physical principles of irradiation. Important contributions have also been made upon the biologic effects of x-rays and radium. In clinical practice it is essential to consider the biologic as well as the physical factors of treatment. To better evaluate progress in the management of cervix cancer, the attempt should be made to review some of the biologic factors believed to affect tumor regression.

The aim of radiation treatment is to deliver an adequate dose to the tumor-bearing region with a minimum of damage to normal tissues. In cervix cancer one usually thinks of skin, bladder, and intestine as being the most important normal structures apt to be over-irradiated. Lesser consideration is given parametrium, myometrium, and normal supporting tissues within the tumor itself. These latter cellular elements, consisting chiefly of connective tissue, muscle cells, and blood vessels, constitute the so-called tumor bed.

The action of radiation is a combined attack upon cancer cells and tumor bed. There is considerable evidence that regression depends equally upon alterations produced in the normal supporting structures of the tumor bed, as upon changes occurring in the abnormal cancer cells. The histologic alterations following the application of specified amounts of radiation have been abundantly described by several authors. The more important effects noted in cervix cancer include swelling of the tumor cells, pyknosis and fragmentation of nuclei, hyalinization, and degeneration. Changes in the tumor bed are more subtle, but equally as marked. There is an almost immediate infiltration of lymphocytes and plasma cells. There then follows a gradual increase in fibroblastic activity that may result in a dense connective tissue overgrowth. A complete breakdown

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in capillary structure is apt to occur, with obliteration of blood vessels by thrombosis or endarteritis. Within a reasonable time after treatment, one may find a fibrotic tissue that is quite hard, dense, and avascular.

All of the changes produced in the tumor bed from the initial lymphocytic invasion to terminal fibrosis and ischemia appear to be a response to injury produced by radiation. These alterations can readily be related to regression. It is also not unreasonable to believe that by such processes, small nests of tumor cells, which for some reason escape total destruction, may become strangulated and remain clinically inactive although fully viable. If, therefore, there exists before treatment an abundant opportunity for marked changes in the tumor bed, one can frequently expect satisfactory regression, and greater possibilities for strangulation of any residual cancer cells. By the same reasoning one may expect a less favorable result in the presence of pre-existing fibrosis and ischemia. This is shown clinically by the marked radioresistance of recurrent lesions in which earlier irradiation produced extensive changes in the tumor bed. It may be stated, therefore, that the status of the tumor bed is an important factor in clinical response.

Changes produced in individual tumor cells may also be considered a response to injury. The degree of alteration may vary considerably within a single microscopic field. No full explanation has been given for this phenomenon, but Fallia has demonstrated that swelling of the cytoplasm is closly associated with, if not responsible for, cellular death. The swelling is believed to be the result of ionization produced by radiation. Due to an excess of ions outside the cells, water is carried into the cytoplasm by the passage of ions attempting to equalize the difference in electrical charge. He found that the injection of distilled water into the irradiated area increased the amount of swelling. These data contribute experimental evidence upon the importance of environment in tumor regression.

It has been stated by several authors that it is essential for alterations in cancer cells as well as in the tumor bed to proceed in an orderly manner if a satisfactory result is to be obtained. Several factors may interfere. One of the most common is over-treatment of some regions. In such instances the normal tissues of the tumor bed may be damaged beyond the limits of repair. If necrosis and death of these structures occurs, there is marked interference with fibroblastic and vascular changes. Some believe injuries of that sort may result in unrestrained growth of cancer rather than control of the lesion. It may be that a complete breakdown in the tumor bed liberates the growth from most restraining mechanisms normally present. Infection may also be responsible for treatment failures. The presence of infection tends to lower the threshold for necrosis. That is, lesser amounts of radiation are required for producing necrosis and slough in badly infected lesions. At the same time it should be noted that lesions of that type may require large doses of radiation, because infection is also believed to contribute to greater radioresistance. Biopsies of some ulcerated and necrotic cervical cancers show histologic changes before treatment that are comparable to the early alterations in both cancer cells and tumor bed noted in specimens removed from patients under irradiation. This may be of some significance in the attempt to explain the greater radioresistance of infected lesions.

Radiosensitivity has been defined by Stewart as that combination of circumstances resident in the tumor or the host which permits marked or total local tumor regression under doses of radiation sufficiently small to preserve the essential integrity of the host's tissue. Some tumors are markedly sensitive to radiation and disappear very rapidly after small doses. Others may disappear very slowly and only after large amounts of radiation have been administered. Regression of the latter type is due to slow sclerosis. It is obvious, therefore, that there are degrees of radiosensitivity. The term does not imply that a tumor will disappear from small doses. Neither does it imply that a high percentage of cures will be obtained, because some of the most sensitive lesions, such as lymphosarcoma, invariably recur. There are also degrees of radioresistance. Some lesions are totally unresponsive to radiation, but in others satisfactory results may follow the administration of enormous amounts of external and interstitial treatment approaching the limits of tolerance for normal tissues. Radiosensitivity or radioresistance applies only to the biologic properties of a given lesion. The terms are not necessarily related to prognosis.

No full explanation can be given for sensitivity or resistance to radiation. The tissue of origin has been used by a number of authors as a basis for estimating the expected response to treatment. Squamous cancer of the cervix falls in a moderately sensitive group. Many attempts have been made to correlate radiosensitivity with the degree of cellular differentiation. In cervix cancer there may be some relationship between histologic type and the immediate response to treatment, but it is extremely difficult to correlate these findings with end results. Some other factor must be employed in the at-

tempt to predict more accurately the sensitivity of a given tumor. Microscopic study of biopsy specimens reveals only spotty data upon the status of the tumor bed and the amount of infection. The conditions existing in one small piece of tissue removed from the lesion may be quite different from tumor located only a few millimeters distant from the site of the biopsy. The gross character of the lesion can be determined only by visual inspection and digital palpation. The clinical response of a given tumor will often be in closer agreement with radiosensitivity predicted on the basis of data obtained by direct examination than by an estimation made on histologic findings.

Carcinomas of the cervix can be divided, according to the gross appearance of the tumor, into three separate groups. Perhaps the most common form of cervix cancer is the so-called cauliflower lesion. These may be small local tumors located on only one lip of the cervix. Others may be large bulky lesions that completely replace the cervix and almost fill the vagina, but frequently without fornical involvement or parametrial extension. There are, of course, cauliflower varieties of all sizes associated with different stages of advance of the disease, but in general they are everting growths tending to form bulky lesions with a minimum of invasion into deeper structures. They are characterized by friability and vasularity. Bleeding is apt to appear early and may be troublesome. It is obvious that they have a rich blood supply, and that the structure of the tumor bed forms only a loose fragile support. Due to the abundant opportunity for radiation fibrosis and ischemia, one would expect marked radiosensitivity. Clinical experience has shown that lesions of this variety are the most sensitive types of cervical carcinomas. Due to their marked friability, however, cauliflower lesions are apt to be ulcerated. Deeper portions of the tumor are exposed to infection through superficial ulcerations. Necrosis and slough are not uncommon. In the presence of marked infection they may show considerable radioresistance. They may undergo extensive radiation necrosis with destruction of the tumor bed if initial doses are too large.

Another type of cervix cancer, seen almost as frequently as the cauliflower variety, is one characterized by diffuse enlargement of the cervix, usually nodular, always markedly indurated, and frequently presenting an intact surface epithelium without ulcerations. These are infiltrating types of growths with a marked tendency toward invasion of deeper structures. The tendency toward invasion is apparently one of the factors responsible for their induration. In the attempt to resist direct extension of the tumor, normal tissues throw up a barrier of connective tissue. Fibroblastic activity, therefore, is marked, and the blood supply may be scant. Bleeding is usually a delayed symptom and may not be present until the lesion has reached a rather advanced stage. This seems to be due to the tendency of the tumor to grow beneath the superficial epithelium of the cervix. As a result ulcerations are uncommon, and infection may not be marked. In spite of the relative freedom from necrosis and slough, however, infiltrating types are considerably more resistant to radiation than cauliflower varieties. This is best explained upon the basis of the preexisting fibrosis and moderate ischemia.

A third type of cervix cancer is the so-called cratered lesion. The formation of a crater depends chiefly upon infection followed by necrosis and, finally, slough. Friability may also be a factor in the dislodgment of large tumor fragments. Among patients with cratered lesions, one can frequently obtain the history of sudden profuse hemorrhage. Bleeding of this sort may mark the time at which a large portion of the crater was formed. As a separate classification these tumors form a less distinct group. They must obviously have begun either as cauliflower or infiltrating types. It is reasonable to assume that e v e r t i n g growths would be more apt to result in cratered lesions, due to their greater friability and subsequent infection with necrosis and slough. Evidence that this is true is shown clinically by the relatively favorable radiosensitivity of many cratered forms. Some show a surprising response to radiation in spite of the marked degree of infection always present. P r o g n o s i s in cratered lesions is unfavorable, however, because they are usually associated with well advanced stages of cervix cancer. There are, of course, small lesions with a central necrotic crater, but in general extensive necrosis and slough do not develop until the tumor has grown considerably and involved adjacent structures.

Prognosis in cervix cancer depends upon many factors. One of the most important is the extent of involvement of the carcinoma. In clinical practice, however, it is important to have some knowledge of radiosensitivity. It is not only essential to know something about the response to be expected in a given tumor, but also the reaction apt to be produced in all other tissues. Among very advanced lesions, for example, the aim of treatment may be for palliation alone. In such instances it is important that this be accomplished with a minimum amount of radiation. Over-treatment may not only fail to produce

the desired palliation, but also result in radiation sequelae that contribute materially to general discomfort. At the same time it should be noted that under-treatment entails risk of recurrence. Too small an amount of radiation applied to a favorable lesion of a highly radiosensitive character may result in reappearance of the tumor in spite of complete clinical disappearance immediately following the primary treatment. For improving clinical results, therefore, it is essential to individualize the treatment of each patient. Biologic as well as physical factors of irradiation must be considered in every instance. The presence of biologic properties indicating radiosensitivity does not necessarily imply that a good result is to be expected. At the same time it is essential to have knowledge of those factors in the attempt to estimate the minimum amount of radiation believed to be necessary for control of the lesion in question, and the maximum dose believed to be practical in the most heavily treated regions.

It is obvious that no standard methods of treatment can be applied to all patients if the irradiation of each lesion is to be individualized. There are, however, some fundamental procedures essential in every instance. There is, for example, general agreement that x-rays should precede the use of radium. By this means infection can be reduced, and as a result of lessened inflamation, there is a tendency for ulcerations to heal. With repair of raw surfaces there is a decreased amount of bleeding. Following a preliminary course of x-rays, there is also some regression in the size of the primary lesion. It is obvious that this will facilitate radium treatment given at a later date.

There are other procedures that can also be used in the attempt to reduce infection. The commonly used vaginal irrigations can be supplemented by various office and clinic procedures. For this purpose an air spray, such as is used in nose and throat conditions has been found useful. It may be that the mechanical washing away of infected secretions is of as much benefit as the direct action of chemicals applied by spraying. Among preparations found to be practical have been sodium perborate, hydrogen peroxide, and zinc peroxide, medicinal. The action of the latter compound depends upon the slow liberation of nascent oxygen following activation by heat. More effective use of this preparation has been obtained by applying it as a paste to the infected lesion. Cervices have been painted with mallophene in the attempt to obtain bactericidal effects deep in the tumor by absorption of the chemical with eventual elimination by urine.* The production of fermentation by sugars also has an effect upon bacterial flora. It is difficult to establish by clinical observation any superiority for one method over another, except to say that the elimination of slough apparently proceeds more rapidly if oxygenization is added to procedures having only a bacterial effect.

There can be no doubt but that any attempt to reduce infection will contribute to better tumor response. For improvement in clinical results, however, there must be further advance in methods of treatment. This can best be done by careful evaluation of all biologic and physical data in each instance. One must first decide upon a minimum dose believed to be adequate for control of the lesion in question. It is then essential to distribute the necessary amount of radiation as evenly as possible throughout the tumor-bearing region. If some areas receive an inadequate amount, recurrence is to be expected. If other regions are over-radiated, necrosis may result, which, in turn, interferes with regression.

In so far as x-rays are concerned there is considerable uniformity in distribution of the dose applied, except that decreasing amounts arrive at succeeding depths beneath the surface. For radium, however, there is marked irregularity in the distribution from a single source. The loss of intensity is enormous within a few millimeters. If a number of tubes, capsules, etc., are employed, the discrepancy between the minimum dose reaching some points and the maximum amount falling on others can be reduced. By means of the "cross fire" from multiple capsules, it may be practical to deliver an adequate dose throughout a given volume without employing any single source for a period apt to produce extensive necrosis in the adjacent tissues. In cervix cancer it is essential to use intravaginal radium in conjunction with an intrauterine tandem. The most logical method for increasing the number of sources employed in treatment is the use of interstitial irradiation (seeds, needles, etc.). In very resistant lesions, such as post-radiation recurrences, needles have been found to be a most practical method of treatment. In such instances a relatively large minimum dose is required. At the same time, due to fibrosis and ischemia, there is risk that over-treatment may produce a more or less permanent radiation ulcer. It is obvious that a fairly uniform distribution of radiation is essential in those lesions.

Of the total dose arriving at the cervix and tissues immediately adjacent to it, more is contributed by radium than by x-rays. This should not be interpreted, however, as minimizing the importance of external ir-

*Samples of all the above preparations were contributed for trial by the Mallinckrodt Chemical Company, St. Louis, Mo.

radiation. Radium applied to the primary lesion will control cancer within a radius of only a few centimeters. Much of the total dose reaching more distant points is contributed by x-ray. In planning treatment, it is essential to consider the contribution from each method. A preliminary course of x-rays not only results in a moderate amount of radiation reaching the tumor, but also functions as a preparatory period of treatment before radium. In small local recurrences that are quite radioresistant and relatively free from infection, the use of preliminary roentgen treatment may be less important. In all badly infected tumors, however, it is essential. At the same time we have probably used lesser total doses than those sometimes employed in other clinics. There is some evidence that maximum effects from both x-rays and radium should coincide more closely than has been our practice in the past. Too large an amount of x-rays may produce an untoward effect by necessitating a long period of recovery before radium can be applied.

Some authors have reported their early results obtained in the attempt to replace radium by x-rays alone. We have had no experience with voltages in excess of 400,000, but with x-rays of that order there has been little evidence that such could be accomplished. Among technical procedures that do bear promise of improved clinical results has been the use of transvaginal or direct roentgen treatment of cervix cancer. We have used this method not in the attempt to reduce the amount of external irradiation or radium employed, but in order to contribute a greater dose applied fairly uniformly to the cervix and adjacent structures. This method is limited, however, to patients presenting a moderately large vagina with reasonable mobility of the vault.

No attempt has been made to outline any specified technic of treatment. The importance of individualizing each patient has been emphasized. Discussion of some factors believed to affect radiosensitivity has been given. Improvement in clinical results is to be expected if radiation is planned upon the basis of biologic and physical factors of treatment. The more important procedures include attempts to reduce infection and prevent excessive radiation necrosis.

The Surgical Treatment of Radiation Damage to Tissue*

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The discovery of the roentgen ray in 1895 released to the medical profession one of the most powerful physical agents known. This ray was immediately put to use both for diagnostic and therapeutic measures. It was very early apparent that this agent, in order to destroy abnormal tissue, would in some cases have a deleterious effect upon normal tissue. In 1896 Marcus reported a case of roentgen ray dermatitis. He also claimed a case of malignant degeneration engrafted upon a radiation ulcer.

Corrective measures were used from the outset. Today the clearer understanding of irradiation effects, the giving of fractional doses, and the employment of protective measures both for patient and radiologist result in a surprisingly small number of untoward effects on normal tissue. The surgeon should assume some responsibility in cases of radiation damage, if he expects the radiologist to use the maximum dosage. In many cases the x-ray cures the patient of a worse condition than can possibly result from tissue damage outside the malignant lesion.

In order to understand a proper procedure for relief of pain or undesirable effects from irradiation, one must look carefully at the pathology encountered. To the surgeon the principal element of radiation damage is one of avascularity or a disturbance in circulation of the part. With this of course one finds necrosis, ulceration, loss of regenerative capacity.

Microscopic Pathology: The early tissue

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changes brought about by irradiation are those of inflammation, with proliferation and exfoliation of the epithelial cells. Later the dermis, including the elastic tissue, hair follicles, and glandular elements undergoes degeneration, followed by atrophy and sclerosis. The capillaries show a progressive proliferative endarteritis characterized by a diminution of their caliber, or by a complete obliteration of their lumina. The result is ischaemia of the tissues supplied by these capillaries, and necrosis and ulceration results. Capillaries, arteries, veins, and lymphatics show obliterative changes. Cell function is lost, regenerative capacity is lost or reduced to a low point.

Clinical Groups: 1. Lesions resulting from a single dose (massive dose), intentional or otherwise. It must be granted that there is an individual susceptibility in some cases, depending on age, concomitant disease, previous treatment, etc. However, in some cases the dosage has been found to have been excessive.

2. Lesions resulting from small but frequent doses over a long period of time. This is the larger group of cases. Cases treated for lupus, acne, ringworm, pruritus, naevi, etc. Deep therapy cases, especially those treated for malignancy.

3. Professional workers, many of them physicians. The most commonly affected parts are the hands and face. Some of these patients used the x-ray before knowing the dangers involved, or the proper precautions to employ.

Surgical Treatment: It should be stated here that no two cases present the same problems of treatment. One cannot make dogmatic statements as to the care because of the wide variation of conditions encountered. Also this paper does not hint as to the care of radiation injury to the lungs, brain, abdominal viscera. We are speaking here especially of those lesions that are present externally. The surgical repair is divided into two stages: a. Excision, and, b. Repair. In most of the chronic cases the two stages are done at one operation.

In the cases resulting from one massive

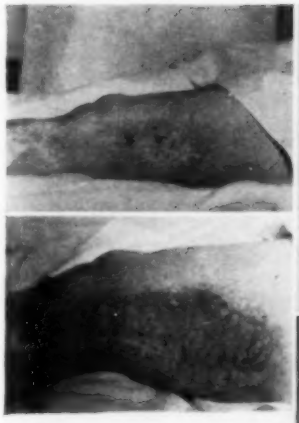
Case 1, Figure 1 (top left)—Extensive radiation burn with ulceration and necrosis.

Case 1, Figure 2 (top right)—Same case following wide excision and skin graft.

Case 2, Figure 3 (lower left)—Extensive epithelioma of face, nose and lip.

Case 2, Figure 4 (lower center)—Tumor destroyed by x-ray therapy. Note loss of pigment, contracture of eyelid.

Case, 2 Figure 5 (lower right)—Result following a sliding graft from forehead, tube graft from neck.



Case 3, Figure 6 (top left)—X-ray burn of thigh and leg. This photograph was taken 30 years years after treatment and shows ulceration and telangectasia.

Case 3, Figure 7 (lower left)—shows the result following excision and use of split graft.

Case 4, Figure 8 (top center)—Fluoroscope burn which extends down to tendons.

Case 4, Figure 9 (lower center)—Area after excision and skin graft.

Case 5, Figure 10 (top right)—Ulcer at site of radiated area (epithelioma), treated ten years ago.

Case 5, Figure 11 (lower right)—Result following excision and use of split graft.

dose with subsequent necrosis and pain, the best procedure as a general rule is that of wide excision of the avascular part. Here too one must speak with caution for the reason that the limits of damage are not well defined. Following the excision of what seems to be all of the area, one may find later necrosis at the periphery or at the base of the wound. The repair of these defects is usually postponed until healthful appearing granulation surfaces develop. The pedicle graft may be used for improvement of the circulation of the grafted part, as the pedicle graft carries the blood supply with it. The choice of graft depends upon many factors. If one uses a pedicle from the area next the damage, the circulation may not be satisfactory. The percentage of takes in the free grafts is surprisingly high.

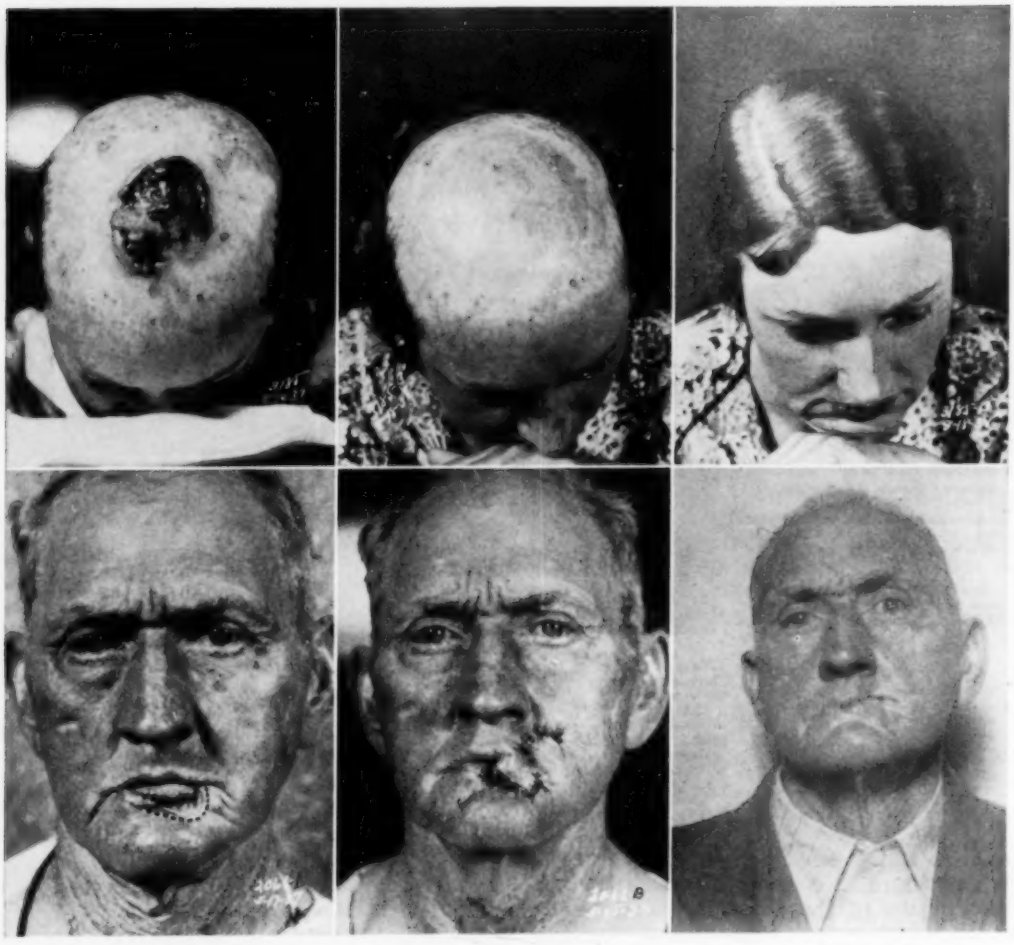
In the chronic cases one can usually find a line of demarcation without difficulty. All of the damaged tissue is excised unless it encroaches upon a vital structure or tends to enter into a cavity such as the chest or abdomen. The thick razor or split graft usually suffices for the plastic correction. However, one may use pedicle grafts if the cosmetic aspect is important. The hands can usually be done satisfactorily with free grafts. If the lesion uncovers tendons, joint, or bone, the pedicle graft becomes necessary for functional results as well as a protective factor. In case of a suspected malignancy within the ulcer, the Bovie knife is the best implement to employ in the operation.

Conclusion: A brief outline of the surgical treatment of lesions following radiation has been presented. One may say in this connection that the excision of the painful ulcerated area in the acute cases affords dramatic relief. The repair of the chronic cases is attended by a high percentage of satisfactory results.

CASE REPORTS

Case 1. Figures 1 and 2. Extensive ulceration and necrosis of buttocks following irradiation for ringworm (one massive dose). This patient suffered considerable pain, general nervous upset. The treatment consisted of wide excision with the Bovie Knife. The dissection extended down to the capsule of the prostate gland. The wound was allowed to rest several weeks, following which the granulation area was covered by small deep grafts.

Case 2. Figures 3, 4 and 5. Extensive epithelioma of face, nose and lip. This patient was treated by radiation therapy to



Case 6, Figure 12 (top left)—Burn scar on scalp of 28 years duration, with malignant transformation.

Case 6, Figure 13 (top center)—Same area following excision with Bovie knife and thick split skin graft.

Case 6, Figure 14 (top right)—Effect obtained by wig.

Case 7, Figure 15 (lower right)—Defect of lower lip following removal of malignant tumor. (Epidermoid carcinoma)

Case 7, Figure 16 (lower center) shows first stage in Estlander operation, with flap borrowed from the upper lip.

Case 7, Figure 17 (lower right) shows final result.

the point where the tumor was entirely destroyed. Following the therapy, there presented a loss of pigment of the skin, a part of the nose was absent, the ectropion of the lower lid preceded the radiation. The sight of the eye was destroyed. Treatment from a surgical standpoint consisted of radical removal of the eye and orbital contents, the removal of the dry and depigmented skin of the face. Reconstruction of the orbit was done at the same operation by a sliding graft from the forehead. Later the nose and lip were repaired by a tube graft from the neck. Apparently a five year cure.

Case 3. Figures 6 and 7. A case of chronic ulceration of leg and loss of pigment, telangiectasia, and skin atrophy resulting from irradiation administered 30 years ago. Wide excision of area was done, and at the same operation a large split graft set in the defect. Microscopic pathology negative for malignant transformation.

Case 4. Figures 8 and 9. Damage by fluoroscope used to remove a foreign body from forearm. The lesion persisted two years under conservative treatment. The area was excised and the defect covered by a pedicle graft taken from the abdominal wall. The extensor tendons were exposed at the time of the removal of the devitalized tissue. Good function resulted in this area.

Case 5. Figures 10 and 11. Chronic ulceration at site of radiated tumor of face treated ten years ago. Following excision of area, a thick split graft was applied. Microscopic exam negative.

Case 6. Figures 12, 13 and 14. Burn of scalp sustained by fire at age of 18 mos. Later treated by ultraviolet ray over a long period of time. Excised tissue proved to be carcinoma. Defect covered by thick split graft three weeks after excision of tumor area with Bovie Knife. Final effect secured by use of a wig.

Case 7. Figures 15, 16 and 17. Defect of lower lip following radiation for epithelial tumor. Repair done two years after last treatment. The so-called Abbe or modified Estlander operation was used to repair the defect, namely, a pedicle of upper lip used to repair the lower lip defect.

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Psychiatry in National Defense*

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Fast moving events of the past months have affected all of us, but still it is hard for us to realize that a topic suitable for discussion before this State Medical Association might be concerned with military matters and national defense. This is the reality which we must face, the sooner the better. The physicians of this country have placed on them one of the gravest responsibilities they have ever experienced. Men of various ages may be registered as selectees by the National Selective Service; draft boards may be formed and be functioning in choosing men; but the physicians of the country are equally responsible for the proper selection of men fit for duty in a highly specialized mechanized defense or war. In addition the physicians are placed in a position where they can contribute not only to the military service, but to the public health, personal welfare and economic future of the citizens as well.

The conduct of war is no longer banding together large forces of men who are physically able to carry on combat. The combat zone now reaches into the factory, the farm, the home and throughout the community. The conduct of war may be impeded by inefficiency at home just as seriously as in a front line. The active fighting units no longer may depend on gross man power and equipment. They are now functioning as groups of specialists in warfare, fast moving, highly trained, technical, integrated teams pyramided one on the other. The mental status of each individual making up such a team is now as important as his physical status. We are now concerned with total defense, defense at home as well as at the front. Emphasis is now to be laid on the selection of men for jobs at home or in the military service, wherever they may be of the utmost value for defense. Furthermore, total defense includes keeping men where they will not break down mentally or physically.

Reasons for this movement or change of emphasis are manifold, and are apparent to us as we view the conflicts going on in the world. More clear to us, however, are some lessons learned from our own experience with the World War.

Psychiatry had not set the world on fire by 1918, but events thereabouts kindled some fires under psychiatry. One result shows in the careful studies made of the records of the World War, from which some interesting figures may be quoted.

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Colonel Porter, of the Army Medical School and Walter Reed Hospital, Colonel Madigan of the Surgeon General's Office, Colonel Cooley of the Veterans Administration Facility, and others have summarized these facts on behalf of the psychiatric seminars of the Selective Service System. These seminars have been held in various parts of the country in an effort to bring to the attention of the profession the importance of the psychiatric examinations of selectees.

First, let us see what are the facts from the World War and Army records.

I wish to quote certain figures taken from Vol. X, "The Medical Department of the United States Army in the World War."

Admissions of officers and enlisted men from April, 1917, to December, 1919, because of neuropsychiatric conditions were 97,657. Discharges of the same were 41,-976.

Total number of rejections (neuropsychiatric) by local boards in different states were 549, 099.

The Provost Marshall's report covering only the period of February, 1918, to October, 1918, (nine months) states that because of mental deficiency, nervous and mental disorders, rejections by local draft boards and camp surgeons amounted to 48,242. 13,612 were accepted by local boards but rejected by camp surgeons. 9,268 more were discharged from the Army after acceptance by local boards and camp surgeons. More than 8,000 neuropsychiatric cases, mostly psychoses, were returned from overseas prior to June, 1919.

A psychiatrist spotted one mentally ill man practically at the gangplank during one embarkation. It was too late to hold him; he was taken to France in charge of two soldiers, kept there pending proper procedure and finally returned in charge of two soldiers. No one knows the countless similar problems faced by the Army Services, and the injustice to the soldier.

Eternal vigilance on the part of the examining physician is the only defense we have against these appalling figures. The careful screen of the psychiatric examination is the prevention and cure of this problem.

Next, let us see what has landed in the lap of the Veterans Bureau as the result of the facts I have just discussed.

Monetary benefits of the 17 years existence of the Veterans Bureau from 1923-40 paid out to claimants of disabilities of the nervous system alone were $641,857,704. Paid out for the fiscal year of 1940 to 68,-727 neuropsychiatric claims was $41,889,363. These cases were 20 per cent of beneficiaries of all types of conditions. Any disability, if manifested before January 1, 1925, can be classified as service connected. There is a presumption of soundness at time of enlistment, and each case must be considered thus, "unless recorded otherwise by the examining physician at time of enlistment." There are none of us who begrudge the rightful care and treatment of men incurring disabilities in the service, but we physicians are really responsible for injustice to the taxpayers of the nation if we do not exercise due care in eliminating these individuals who show signs of neuropsychiatric disorder prior to induction in the service.

More figures make the picture worse. In 1939 there were 11,000 men classed as permanently disabled, and over one half of these were neuropsychiatric, mostly psychoses. They are receiving $700,000 a month pensions and disability payments ranging from $150 to $175 per month.

Hospital treatment for benefit of the neuropsychiatric cases from 1933 to 1940 inclusive cost $282,679,990. Add this to the figure mentioned above of monetary benefits from 1923 to 1940 ($641,857,704) and we get a grand total of $924,537,613—practically a billion dollars.

These costs do not include the expenses of domiciliary care, national homes for disabled soldiers, etc.

One serious angle of this is the fact that neuropsychatric cases have a slow turn-over and they "freeze" Veteran Bureau beds. In June, 1940 there were 27 veteran mental hospitals handling 33,000 beneficiaries, and they have long waiting lists. These 33,000 psychiatric cases are over one half of all the hospital cases.

Finally, it has been estimated that every man who breaks down from the service with psychiatric disability, will cost the government between $30,000 to $34,000 during his life time. In civilian life or State Hospital care, the figure is approximately $7,000.

THE ROLE OF THE PHYSICIAN

These facts and figures from the World War and the Veterans Administration cannot be lightly dismissed. As a natural result the Selective Service of 1941 now calls our attention and study to these same problems with the hope that we may profit by previous experience. As physicians we are now called on for an improved job as our contribution to national defense. To help establish in our minds what might be considered the new attitude we should use, let me quote the words of Dr. Clarence Dykstra, former Director of the Selective Service:

"The Selective Service is . . . interested in diagnostic problems about heart and lungs and gastro-intestinal systems, the blood, the bones and joints, and everything else that

has medical bearing on the suitability of registrants for induction into the Army.

"The work of specialists in the fields, however, is less in need of immediate attention than is that of the psychiatrist. The work of these other specialists, whether for Selective Service or on the Army Induction Board, is much nearer to their routine practice than the work which we ask of the psychiatrist. The psychiatrist ordinarily sees fully developed problems, whether in the hospital for mental disorders, the clinic, or in his own office practice. We have to ask him to orient himself from that type of work to the diagnosis of early or merely potential mental problems. We want him to use his skill to exclude, as far as possible, all those people who would be seriously damaged in their capacity for useful living by the circumstances which they would encounter if they were inducted for military training. We want him to exclude, as far as possible, all those who, because of personal peculiarities and deviations, would break down in the service or who would have an unfavorable effect upon discipline and morale. And we want him to exclude those who, however well they might do under actual military training, would probably break down when they were returned to civil life.

"This is a large order, we realize. I think you now see why, while we intend to neglect no relevant aspect of medical science, we feel psychiatry is the first in line."

We must accept the challenge contained in these statements.

The local board, with its consulting physician is our first screen. By utilization of the information available to the board members and through the examination of the local physician, the most unfit should be rejected. Secondly, those individuals in community life who do contribute even in a small way, but who under greater stress and strain, or in a new environment could not adjust, are another group who should not be inducted. Thirdly, certain individuals, psychologically unsuited for a military profession in which they would become a burden rather than an asset, should be retained at home where they can continue normal useful life. Perhaps some critical individuals might say some one is being favored or pampered, that it is unfair. But why should we waste any anxiety over giving an occasional man an unjustified possible advantage? Our real concern must be to give the military service the important advantage of receiving only those who unquestionably can be trained into smoothly functioning, efficient, well adjusted soldiers.

If doubt arises regarding the status of any selectee, the local board or physician may call for the aid of the medical advisory board. If the experienced psychiatric consultant is not available, which may be true in certain localities, there are other sources of help available. Every State Hospital staff stands ready to aid in examining those few cases. The Veterans Administration Facility with large hospitals and experienced staff, located in some nearby area, likewise will respond to any request for consultation.

What are the conditions and types of problems or personalities which should be looked for in determining suitability of selectees for service? Medical Circular No. 1 of the Selective Service, and Circular Letter No. 19 of the Surgeon General's Office of the War Department, give us a very complete outline which I shall briefly discuss. The groups listed are intended solely as a practical guide, and physicians should follow them with discretion and judgment, in order not to reject applicants or selectees without adequate and positive diagnostic indications of their unsuitability for active service, since their unwarranted rejection would not only constitute an injustice to the individual concerned, but would deprive the government of their service. A direct quotation from Circular Letter No. 19 is very significant:

"The soldier must be looked upon as a fighting unit requiring certain limited and definite qualifications. Not all types of individuals are adaptable to restrictions and inhibititions of personal desires and comforts, nor to deprivation of rest, food, shelter, and, as the occasion oftentimes arises, to extraordinary demands of prolonged physical and mental activity during active military service. It must be remembered that many individuals of abnormal personality traits, who are capable of satisfactory adult adjustment in civilian life where numerous avenues of escape are available, will be at a total loss to adjust themselves to a pattern which is more or less inflexible and, of necessity, delimited and circumscribed as to self-expression. When thrown on their own meager resources of adaptation in Army environment, in contact with all kinds of personalities, some who are just able to adapt themselves to life under the most favorable conditions will not fit into the one iron mold which experience has taught is essential to military success."

With this attitude in mind let us consider the different groups of common neuropsychiatric conditions.

Group I: Mental Defect or Deficiency

Intelligence cannot be definitely estimated, and there are no infallible tests. The history of failure in school in the lower grades, inability to hold jobs, or inability to be properly disciplined, a lack of information, ability to learn or reason, and general signs of men-

tal inadequacy are characteristic. The average community knows who these men are and what capacity they possess. Psychometric testing can be used for classification of doubtful cases.

Group II: Psychopathic Personalities

These are the individuals who are not mentally ill, who are not mentally deficient, but nevertheless are unable to learn by experience, to measure up to ordinary social responsibilities. They are emotionally unstable, undependable, impulsive, always in difficulties, and often in conflict with the law. They cannot be disciplined, will not conform to authority and are constantly cultivating insubordination. Among these are the homosexuals, grotesque liars, vagabonds, wanderers, swindlers, kleptomaniacs, pyromaniacs, alcoholics, and irritable and arrogant guard house lawyers. They are among the worst of the men suitable for military service.

It may be true that some psychopaths and morons make good soldiers. Officers of the Army as well as experienced psychiatrists also tell us, however, that it is impossible to detect what types would turn out to be satisfactory.

Group III: Major Abnormalities of Mood

Some people are so mercurial in their reactions that they have unreasonable episodes of elation or depression in which their judgment is seriously impaired. The more extreme examples we know as manic depressive psychoses. If they are known to have received medical or nursing care because of an excitement or depression, they should be rejected.

One officer, commanding an artillery brigade, developed an acute mood swing during an engagement. Because of his resulting distraction and excitement, he changed his firing directions and range so frequently that he bombarded his own troops more than the enemy.

Group IV: Psychoneurotic Disorders

Hysteria, psychasthenia, anxiety neurosis, and anxiety states are clinical psychoneurotics who are unsuitable. Their symptoms may be hysterical and not understandable; they may have periods of morbid anxiety or fear; compulsions or obsessions and hypochondriacal states may control much of their lives.

This quotation from Circular Letter No. 19 is important:

"For purposes of classification, there are to be placed in this group persons showing the so-called *psychosomatic* disorders, mental or personality difficulties chiefly characterized by signs and symptoms of systemic disease—respiratory, gastrointestinal, cardiac, genito-urinary, or dermatological. These include many cases of asthma, urticaria, "neurasthenic states," neurocirculatory asthenia, "effort syndrome" or D.A.H., paroxsymal tachycardia, gastric hyperacidity, pylorospasm, gastric and duodenal ulceration, spastic constipation and diarrhea, mucous colitis, impotency, urinary urgency or frequency, and incontinence of semen. Look for a clear relationship in the history of attacks coinciding with periods of *personal stress*, and of improvement with separations from the accustomed s t r e s s f u l surroundings. These conditions sometimes appear early in the course of pre-psychotic states discussed under Group V."

These are the individuals who, when examined, show marked vasomotor instability, characterized by breathlessness, unstable pulse rate, unstable blood pressure, poor exercise tolerance test, tremors, cold, clammy, sweating extremities, all types of sensory complaints and many other signs indicating disturbances in the autonomic nervous system. They do not do well in military service. It is difficult to know whom to reject or accept in this group. The best we can do is to estimate as far as we can from their history what their capacity may be in meeting stress and strain.

They may break down in active service and be a problem instead of an asset; but undisturbed in civilian life, their satisfactory adjustment may be maintained, enabling them to keep their self respect and contribute like others to total defense.

Group V: Praecox Group

Prepsychotic and postpsychotic personalities of this dementia praecox (schizophrenic) group usually have a history of an acute or insidious personality change, in which their social interests, habits, thought and behavior deteriorate. This change may be shown by attitudes of suspiciousness, ideas of self importance (paranoid personalities), unusual irritability or inappropriate emotional reaction, extreme seclusiveness, silliness and unmotivated emotional or motor outbursts. These are the characteristics of grave mental disease and probably will progress to delusions of persecution, delusions of control by bizarre or supernatural agencies, hallucinations of sight and hearing, sexual delusions, oddities of thought, speech and behavior that are obviously queer, abnormal psychotic states. In the presence of marked indifference, apathetic emotional reactions and a history of withdrawal from social, family or other environment contacts, careful study is indicated. A history of the school, vocational, personal career and family life will spot these personalities and conditions.

One such history illustrates a pathetic case. A boy, youngest in his family, grew

up as the favored and best loved child. At 16 he changed personality, and tried to become a man by smoking, drinking, reading Kipling and getting gonorrhea. Soon he was showing more malignant personality changes and began to hear the voices of his father and God. Upon admission to the Army he was reacting more acutely in a paranoid way to his hallucinations. One day he was placed on guard duty over a prisoner in the guard house. Believing the occupant of the guard house was responsible for the accusing voices he heard, he shot the defenseless prisoner dead.

The dangerous undependability of this group may take many avenues of manifestation.

Group VI: Chronic Inebriety

The hard drinker may not necessarily be a poor soldier, but the chronic alcoholic who is morbidly addicted or dependent on alcohol is of no value in military service. A verified history of frequent breach of law when drunk, or hospital treatment on account of alcoholism should be regarded as disqualifying. Drug addiction history or signs, or history of arrest for narcotic law violation is disqualifying.

Group VII: Syphilis of the Central Nervous System

Although blood examinations may help us in eliminating selectees suffering from syphilis of the central nervous system, we must be watchful for anomalous reactions of the pupils, facial tremors, speech defects, writing defects, apathetic, depressed or euphoric mood, memory loss and discrepancies in relating history facts. Knee jerks may be plus, minus, or normal.

Group VIII: Other Organic Diseases Of Brain, Spinal Cord, or Peripheral Nerves

Existent organic nervous disease should always disqualify for military service. Certain after effects of organic nervous disease need not be causes for rejection provided (1) that the disease is no longer operative and is not likely to recur, (2) that the effect left by it does not prevent a satisfactory fulfilment of military duties. Certain organic nervous diseases present few symptoms and may pass undetected by even the most skillful examiners. These include multiple sclerosis, progressive muscular atrophies, dystrophies, and syringomyelia. Epilepsy is particularly troublesome in the service. Special investigation into medical history should be pursued in any case having a history of so-called faintness, dizziness, spasms of the face or extremities, or evidence of deep scars on tongue, face and head.

At any time doubt arises in the minds of the local board or examining physicians, no effort should be spared to have the selectee given a special examination by the medical advisory board psychiatrist or his equivalent.

The final paragraph of Circular Letter No. 19 leaves no doubt as to what the viewpoint of the military service is in reference these points we have been discussing:

"The Army is one of the elements of national defense and its present mission is one of preparation for an offensive-defensive type of warfare. It is in no sense a social service or curative agency. It is to be considered neither a haven of rest for the wanderer or shiftless, nor a corrective school for the misfits, the ne'er-do-wells, the feebleminded or the chronic offender. Furthermore, it is neither a gymnasium for the training and development of the undernourished or undeveloped, nor is it a psychiatric clinic for the proper adjustment to adulthood emotional development. Therefore, there is no place within the Army for the physical or mental weakling, the potential or pre-psychotic, or the behavior problem. If an individual is a behavior problem in the civilian community, he will certainly become a more intensified problem in the service."

Aside from this attitude of the service, and our duty to do our work in accordance with this attitude, there exists a further duty to the men themselves. This question is not alone one of unfitness for military service; it is also a question of fitness and vocational suitability of a man as a civilian. We are preparing not for war (I hope)—but for total defense. Rejected men are not thrown away—they are retained at their efficiency level for industry, etc. It may be a cardinal sin against the national defense to induct a man into the service to which he may be unsuited, to which he cannot adjust and contribute; but it is a mortal sin against the man himself. For in his civilian life, where he is maintaining himself under reasonably favorable conditions, he has his self respect, he is making a contribution personally or economically, small though it be, and he probably will not become a burden on the community for any long period of time at least. To maintain this balance is as much our duty in terms of public health as in terms of total defense. As physicians who are responsible for the examination and classification of these men, we find ourselves today in the front line trench of defense. As has been characteristic of our great profession in the past, I know we will meet our responsibility squarely, intelligently and completely, and do our duty in combating these great problems which threaten civilization and our democracy.

The Doctor's Relation to Public Health*

JOHNNY A. BLUE, M.D.
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Gentlemen, I speak to you today as one of you who has viewed this subject from both sides of the fence, namely: as a Public Health Worker and as a private practitioner. I feel very kindly toward the medical profession because I am responsible to it for my knowledge of medicine which it impounded in me according to the provisions of the Hypocratic Oath. I am also sympathetic with the basic principles of public health work.

Public health activities grew out of conditions that created tasks which no other methods had coped with. Doctors have been prone to shunt public health to the side somewhat as an individual and altruistic task and to allow it to fall on other shoulders. This especially is true in times when no epidemics threaten. As a result of this, the layman gradually has filtered into the public health field. Statisticians, so-called doctors of public health, sanitarians, public health educational directors, food inspectors and numerous others. In a like manner and through efforts to raise funds to carry on a public health program, the slimy hand of politics has entered into the picture. Thus it is hard to carry on a public health program without these various elements entering into it. The blame for such conditions are two-fold. The blame partially rests on the profession for its seeming indifference, and upon leaders in public health for allowing laymen, idealists and politicians to enter a purely medical field. Each year public health expands; each year more money is spent in this field; each year new conditions and diseases are sought out and a new field of activity begun. First it was for control of contagions and epidemics, then parasitic diseases came into the limelight. Later came tuberculosis campaigns. Today the venereal disease program is shining brightly. Tomorrow it probably will be pneumonia, diabetes, heart diseases or something else that will have a public appeal. One by one, the private practitioner largely has sacrificed these conditions from his practice until his field has been reduced to very acute conditions and obstetrics, and the latter is now in the process of public health development.

The profession has been at fault in many instances for allowing this poor state of affairs to exist so that it has been subject to invasion by idealists. But today, with better training and a more solid front, every doctor should voluntarily become a public health worker. I, therefore, would like to advocate a plan to revert all pre-school and school examinations and all inoculations to the private practitioners in their respective communities. This, of course, is not exactly a new plan. I submitted a similar plan two years ago when I was engaged in public health work in the Panhandle. After all it is the private doctor who has to see these children when they become ill, rather than the health workers.

My idea would be to submit a card to each student from the school authorities, stating that the school health program suggested that each student be inoculated against diphtheria, small pox and possible typhoid fever (in regions where this latter disease prevails, or if any traveling is to be done), and that a Schick Test and Tuberculin Test be done. A thorough physical examination should likewise be done on each individual in infancy, at pre-school age, when he enters school and every three years thereafter while he is in school—not just a hasty look at the throat and teeth and hurried listen to the chest, and the slap on the back indicative of a clean slate, which creates a false sense of security—but an examination that will be thorough from the hair to the toenails. The parents could intimate the doctor of their choice on the referred card and the doctor selected should see the children individually or in small groups in his office, with an element of time designated that will allow thoroughness and instill confidence. He, in turn, is to receive a nominal fee (for this combined service), which is to be decided upon by the profession and the school health authorities in each locality. Those individuals able to pay

*Read before the Section on General Medicine, Annual Session, Oklahoma State Medical Association, May 8, 1940, in Tulsa.

for this service will do so. Indigent cases, and those in the lower wage earning brackets, will receive it gratis, the doctor being partly compensated for his services from a school health fund provided by the schools, the county and various welfare and civic organizations, and from similar funds now defraying the expenses of public health activity. The State will furnish all biologics and supplies for such programs.

This will tend to bring the patient and the doctor of his choice closer together, so that in time of illness both will be familiar. It will familiarize people with the idea of a yearly physical check-up. It will increase the doctor's income, help to build a better race by more concentrated individual attention, be cheaper to the taxpayer who is now paying one-third of his annual income in taxes, and release the health official from the yoke of an inadequate yet burdensome school health program so that he can devote more time to educational work, public health information (enough money is spent each year on patent medicines and quackery to give adequate care to all), and epidemiological problems.

If this plan were earnestly pursued by the practitioner, and providing he had followed his clientele from the time of delivery to entrance into school, there would not be such a gap existing between the doctor and the layman today.

This is not an appeal to abolish public health—it is indeed just the reverse. It is, however, a suggestion to place the above mentioned phases of public health work back into the hands of the private practitioner where it belongs, and to release the health officials of these burdens so that they can attend to other public health problems. In short, it is a plan whereby each private practitioner becomes a voluntary, interested, devoted and compensated public health worker. That almost approaches the ideal.

I also think that the profession should encourage a higher type of men to enter public health work so that a thorough educational and epidemiological program can be carried out, rather than to frown upon public health, and, as a result, drive the misfit, the ne'er-do-well and others into the field for a purely economical reason. The latter might carry on a program of pumping typhoid vaccine into every Tom, Dick and Harry they could find and expect to accomplish very much by these expensive and unnecessary programs. Public health work needs men and women who hold the profession in high esteem. This is imperative if public health work is to stay under the wing of the medical profession. Public health is here to stay, but it is frankly up to the profession to put forth every effort to keep it under the wing of organized, ethical medicine, to weed out the unnecessary expense, the lay parasites, politicians and the idealists who have hitched their wagons to the public health star, the misfits and ne'er-do-wells who are receiving a free ride at the expense of the profession and the taxpayer.

The Wagner Act is but a warning to us that our ranks must be drawn closer together. That we must do away with internal strife and personal prejudice and put on a solid front, not for our personal sakes, but for the sake of the people and society in general.

Surgical Procedures for the Relief of Intractable Pain*

JESS D. HERRMANN, M.D.

OKLAHOMA CITY, OKLAHOMA

Intractable pain is a result of chemical or physical irritation to peripheral nerves and fibers carrying the sensation of pain. In cases where the cause cannot be removed, then the pain can frequently be relieved by interrupting the sensory fibers. We shall review a few of the conditions today in which intractable pain is the prominent symptom, and the steps to consider in giving relief. Due to the broadness of the subject and the limitation of time we have purposely

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omitted consideration of the surgery of the sympathetic nervous system, which is of great value in relieving such painful conditions as angina pectoris.

One instance in which the mechanical cause for intractable pain can be removed is that of severe sciatic pain as a result of ruptured intervertebral disc with extrusion of the nucelus pulposus. There is usually the history of trauma with residual low back pain. Later the pain radiates down one of the thighs and frequently to the lateral aspect of the leg and foot. The pain is aggravated by exercise, and severe pain is usually produced with coughing or sneezing and by any motion which tends to put a stretch on the nerve root, such as stooping over, straight leg raising, etc. We characterize this type of pain as a root pain. We know of no one particular finding that is found only in this condition, and it is only after careful evaluation of the history, physical findings, x-rays of spine, examination of spinal fluid and occasionally spinograms that a diagnosis can be made.

The operative treatment is the removal of the extruded nucleus pulposus, thus relieving the pressure on the nerve root. Recent refinements in techinque has made it possible to carry out the procedure through on interlaminar approach, thus preserving to a great degree the bony structures of the spine. We wish to emphasize that extruded disc is only one of several causes for low back pain, and each case must be studied individually and all neurological and orthopedic possibilities considered.

Another example of physical trauma causing intractable pain is that of the scalenus anticus syndrome, or compression of the neuro-vascular bundle between the anterior scalenus muscle and the first rib. The clinical picture is that long recognized in certain cases of cervical rib. The pain is severe and is usually in the shoulder radiating downward to the hand. Early the lower portion of the brachial plexus is involved with pain only in the ulnar distribution. In long standing severe cases the entire plexus may become involved and with sufficient compression of the subclavian artery, gangrene will develop.

The treatment is that of sectioning the anterior scalenus muscle at its attachment to the rib, allowing the artery and brachial plexus to slide forward. This usually gives prompt and permanent relief from pain.

We will now briefly consider some of the conditions in which the cause for the pain is not known or, if known, cannot be removed. Pain can be relieved by destruction of the peripheral nerve by chemicals or surgical section. This is of great value in the case of a nerve that is wholly or to a large degree composed of sensory fibers. Alcohol injection of the trigeminal branches thus gives temporary relief in tic douloureux. However, when the nerve is composed of both sensory and motor fibers, this is frequently impractical, inasmuch as the resulting paralysis often causes as much discomfort as the pre-existing pain. Therefore, other means have been developed for interrupting the pain pathways.

One procedure for the relief of intractable pain is the sectioning of the sensory root. This is most often used in the treatment of trigeminal neuralgia, glossopharyngeal neuralgia, and radiculitis. Trigeminal neuralgia is characterized by paroxysms of sharp, lancinating pains over the course of the fifth cranial nerve. The etiology is unknown. The diagnosis can usually be made from the history of the paroxysms of severe pain in the distribution of one or more branches of the trigeminal nerve, radiating to the distal portion of the nerve, usually precipitated by some local movement or stimulation of the face. There are no abnormal neurological findings. Permanant relief is obtained by sectioning the sensory retroganglionic fibers.

Glossopharyngeal neuralgia, the other major neuralgia, is characterized by severe lancinating pains in the distribution of the ninth cranial nerve. The pain is described as being in the ear and running to the tonsil. The pain is frequently precipitated by swallowing. Whereas the diagnosis of tic douloureux can be proved by alcohol injection of the involved branches, cocainization of the throat will temporarily stop the pain of glossopharyngeal neuralgia. Intracranial section of the ninth cranial nerve will give permanent relief.

The fibers conducting pain in the dorsal or sensory spinal roots may be interrupted by the use of intrathecal alcohol injection. It is to be remembered that if sufficient alcohol is used, not only will the sensory fibers conducting pain, but also the cord, motor roots and fibers of the sensory root carrying other sensation than pain, become involved. Absolute alcohol, being lighter than cerebro-spinal fluid, will rise to the top. The patient should therefore be placed in such a position that the sensory roots to be effected will be at the highest point. This can best be accomplished by having the patient lying on his side and tipped slightly forward. The portion to be injected can then be elevated with sand bags or the kidney rest of the operating table. A spinal puncture is then done just above or below the nerve root to be treated and 3 or 4 cc. of spinal fluid removed. Then 6 to 10 minims of absolute alcohol is injected slowly. A feeling of warmth occurs over the area supplied by the roots treated, and, if suc-

cessful, the pain should disappear within a few minutes. The patient should remain in the same position for some 20 to 30 minutes following the injection. In case the pain is not relieved, it is better to repeat the procedure another day, inasmuch as a large quantity of alcohol will produce paralysis.

The pain pathways may also be interrupted within the spinal cord. This is accomplished by chordotomy or section of the pain tracts through a laminectomy wound. The indication for this procedure is intractable pain in the extremities, pelvis, abdomen, or chest, usually due to malignancy, tabes dorsalis or diabetic neuritis that has not responded to more conservative measures. The technique for the procedure is sectioning the spinothalamic tracts at a desired level after exposing the cord by way of laminectomy. The procedure is not without danger and at times the bladder control is disturbed. Others complain of severe root pain at the level of the chordotomy, and care should be taken to avoid traumatization of the nerve roots at the site of the operation.

SUMMARY

In summary, a few conditions have been reviewed in which an intractable pain is present, and some of the means for relief have been cited. We must remember that pain is a valuable symptom and the diagnosis should be made before measures for permanent relief are instituted. A further fact is worthy of consideration and that is the individuality of pain. Each person has his own particular threshold for pain and reacts in his own way to a given stimulus. This presents a great problem to the physician trying to give the correct treatment for relief of intractable pain.

It is our personal belief that very careful consideration be given to all measures for relief of pain by interruption of the pain pathways before narcotics are used to the point of addiction. It has been our experience that the individual with intractable pain having used narcotics regularly for any length of time, not only suffers from his original pain but further from the effect of the addiction. Then, if pain fibers are at this time interrupted surgically, he receives little or no benefit from the procedure. The decision as to the treatment of intractable pain should be made early, and if possible, relief should be given before the patient is destitute, psychically, morally, physically and financially.

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1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," Am. J. Syph., Gon. & Ven. Dis., 23, 201 (March), 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA

• THE PRESIDENT'S PAGE •

The National Physicians Committee for the extension of medical service is now a virile, functioning organization formed for the purpose of carrying out the policy indicated by the name.

This organization can and will act in many ways and with much more effectiveness than the American Medical Association and, while there is no connection between the American Medical Association and the National Physicians Committee, the American Medical Association is in full accord with the program and efforts of the National Physicians Committee, and every member of the committee is also a member of the American Medical Association.

The committee is financed exclusively by voluntary subscriptions by doctors and those who do not believe in the political control of medicine. The men who have volunteered to serve as members of the committee are all men of unquestioned ability and singleness of purpose, and will with our aid carry our banner and keep it placed where it rightfully belongs as a beacon for all ethical and scientific organizations to follow.

The National Physicians Committee is urgently needed to combat the foul and slanderous propaganda that has been and is being dissiminated by those who are either poorly informed or, from selfish motives, seek to obtain unholy profits by devious methods.

The operations of this committee are financed by your subscriptions and mine. Let us make our contributions at once and as liberal as possible. This is our fight to secure a continuation of our American way.

Let's do our part today.

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Racephedrine Hydrochloride

(UPJOHN)

Racephedrine Hydrochloride produces dilation of the bronchi after local or systemic administration. It is therefore employed in the treatment of asthma, and is useful to prevent the attacks. It is also used in the treatment of hay fever and urticaria.

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Solution Racephedrine Hydrochloride consists of 1% of the drug in a modified Ringer's solution containing sodium chloride 0.85%, potassium chloride 0.03%, calcium chloride 0.025%, magnesium chloride 0.01%, and chlorobutanol 0.5% (for stabilization purposes).

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On local application to mucous membranes, Racĕphedrine contracts the capillaries to a moderate degree and thus diminishes hyperemia and reduces swelling. It is used in the nostrils to shrink the congested mucosa in rhinitis and sinusitis.

Solution Racĕphedrine Hydrochloride consists of 1% of the drug in a modified Ringer's solution containing sodium chloride 0.85%, potassium chloride 0.03%, calcium chloride 0.025%, magnesium chloride 0.01%, and chlorobutanol 0.5% (for stabilization purposes).

Solution Racĕphedrine Hydrochloride 1% is available in one ounce dropper bottles for prescriptions, in pint bottles for office use. Capsules Racĕphedrine Hydrochloride, 3/8 grain, are packaged in bottles of 40 and 250.

FINE PHARMACEUTICALS SINCE 1886

Upjohn

KALAMAZOO, MICHIGAN

Racĕphedrine, prepared synthetically by a process which does not depend upon the plant ma huang for its raw material, is a racemic, optically inactive mixture of levo- and dextrorotatory ephedrine. Thus it contains two of the four possible ephedrine stereoisomers.

EDITORIALS

STRAINING AT A GREAT RESULT IN THE MISCARRIAGE OF JUSTICE

You are requested to take a look at your so-called "Trust," and consider its origin, its development, its scientific, cultural and sociological accomplishments, its uninterrupted policy of service to humanity, and its contributions to civilization.

Six thousand years ago when civilization, Minerva-like, sprang from the banks of the Nile, the first great physician, Imhotep, was there to ease the strain of monarchy and to stay the progress of vascular hypertension which then, as now, plagued the lives of kings and potentates. Certainly the influence of Imhotep's science and philosophy conditioned the Hippocratic Oath which established rules of medical practice for all time.

If the American Medical Association is a trust, it is the only one approximately 100 years old operating under a constitution and by-laws written for the protection of the people 2500 years ago. An instrument making the patient's interests first and the physician's second. The physician must render service with no thought of selfish interests until his patrons and the public are cared for. A strange requirement for a trust!

In Book III, the "Age of Enlightenment," Gomperz (1) devotes his first chapter to "The Physicians." Please note his opinion of the Hippocratic Oath. "At this point we have to mention a document of which the antiquity is not its sole claim to veneration. 'The Physician's Oath' is a monument of the highest rank in the history of civilization."

It is interesting to note that Socrates, whose straight thinking and level reasoning on the everyday problems presented by his youthful followers, had much to do with the rapid development of scientific principles. Of even greater interest is the fact that because of his straightforward teachings and logical application of knowledge, he was condemned to death by his government and that he courageously gave his life for the sake of truth. No doubt he recognized medicine as the chief exponent of his philosophy of life when he employed his last breath to exclaim: "Creto, we owe a cock to Aesculapius. Will you see that it is paid?"

During the life of the American Medical Association and through its influence, the people of the United States have profited by our knowledge of the bacterial origin of disease and the control made possible by what we have learned about infection and immunity; they have welcomed the great boon of anesthesia; they have witnessed the significant development of knowledge concerning vitamins, food values and nutrition; they have observed the amazing change in attitude toward the insane and the therapeutic restoration of a notable per cent of those formerly considered hopeless to a useful place in society; they have seen the life-saving growth of aseptic surgery and the effective treatment of many non-surgical conditions, including specific therapy in some of the most deadly diseases. At this moment they are witnessing the marvelous results of chemo-therapy. They accept the benefits of all the improved diagnostic, preventive and therapeutic measures without a full consciousness of their utter dependence upon them.

These few references show that the American Medical Association has covered a century of remarkable medical progress. Through the influence of these advances and the initiative of organized medicine, the United States has been able to develop a great system of public health, including sanitary engineering. This, with the aid of the medical profession in other lines of preventive medicine, has enabled this Nation to enjoy the best general medical service, the lowest level of morbidity and mortality in the world.

In the past 25 years average longevity has been advanced from 48 to 62 years. In this respect other nations with similar social and economic conditions cannot compare with the United States. This is particularly true of those countries where the government has provided some form of socialized medicine which has invariably increased morbidity and mortality and doubled the cost of medical care. Increased knowledge of the causation and prevention of disease has made it possible for us to live with relative safety in large cities and to engage successfully in the intercourse and commerce of the world.

This advanced knowledge made it possible for the United States to build the Panama Canal. Through lack of knowledge and characteristic impatience, the politicians, engineers and government contractors, irritated by the insistent sanitary demands of General Gorgas, would have defeated this great undertaking had it not been for Theodore Roosevelt's abiding faith in medical science and his willingness to listen to medical coun-

(1) Gomperz: Greek Thinkers, Vol. 1.

cil in spite of the demands of other groups. These results have been accomplished through free professional initiative and independent action.

The time honored principles of practice referred to above, coupled with the refusal of the physicians to profit by life saving discoveries, have protected the public and facilitated the interests of the government. If political leaders had been directed by similar principles, Socrates would not have been a martyr to truth; Rome might have been able to push back the avaricious barbarians; the ambition of modern dictators might be rusting in well-deserved chains and less obvious corruption in high places ashamed to raise its head. Medicine originated in the "primal sympathy of man for man;" it is as old as civilization, as sound and patient as Chinese philosophy. Its principles are fundamental to human welfare and cannot be permanently changed by the obstruction of ambitious politicians who do not understand the true significance of present medical knowledge.

In the government's case against the American Medical Association, the jurors were sworn to a difficult task. The Department of Justice seemed bent upon conviction and it was evident that the prosecution misunderstood or misinterpreted the motives of those cited in the charges. If labor unions had been on trial, the task would have been relatively easy, but conviction would have been untenable because the law gives labor the right to strike and picket, even when freedom from war, death and slavery hang upon uninterrupted production for defense.

L.J.M.

OUR OBLIGATION

Public opinion is without doubt the one item that molds the policy of a democratic people, and success or failure, unanimity or division, depends upon the forces which develop this opinion to the stage of action.

The President has waged within himself a tremendous battle between his patriotic duty and his allegience to a large minority responsible for his election, this group being largely responsible for his inability to carry on a successful program of Preparedness for Defense which is the "Bull" for Preparedness for War.

The President is beginning to emerge on the patriotic side of this battle and, as he does, we will find a developing and increasing degree of unanimity of action in support of a patriotic program.

We must now support the President in this time of undeclared war; whether or not we like him personally, he is going to be our President, and as such our Commander-in-Chief behind whom every Physician must accept his responsibility.

It is difficult for the administration to do an about face with regard to these large minority groups who have been larger than the Government itself. It will be difficult for many who have opposed the policies of the admininstration to do an about face and support the admininstration, but now both must do this very thing if this undeclared war is to be brought to a successful conclusion, and no war can be successfully fought without a patriotic and 100 per cent cooperative Medical Department.

We hope to have as much of the truth from those in command as they feel can be safely divulged, and then the Medical Profession will trim its sails accordingly and be fully prepared to deliver adequate Medical Service.

ATTENTION

We are reprinting a bulletin issued by the Federal Drug Administration as mailed to all Oklahoma County doctors by the Veazey Drug Company of Oklahoma City.

This bulletin is exceptionally pertinent as it pertains to the sale of certain drugs which are particularly potent or which may be a menace to health when used by the lay public without proper prescriptions.

Bulletin From Federal Drug Administration

Section 502 (f) (1) of the Act requires drugs to bear labeling giving adequate directions for use. The Act authorizes exemptions by regulation from this requirement. Under this mandate, an exemption has been authorized applicable to drugs intended for professional use or dispensed on prescription. This exemption authorizes omission of directions where the label carries the phrase "Caution: To be used only by or on the prescription of a ————" (to be filled in by the word "Physician," "Dentist," or "Veterinarian." The basis for this exemption, as will be immediately apparent, is that the physician's specific directions for each individual patient will be far more adequate than any general directions supplied by the manufacturer. The regulation provides that the exemption shall expire when articles so labeled are sold otherwise than to practitioners or on their prescription. Section 301, particularly paragraphs (e) and (k), is applicable in such cases, and, you will note, makes the retailer liable to the penalties provided.

Generally speaking the drugs which are labeled with the so-called prescription legend are those which are particularly potent or which may be a menace to health when used for self-medication. A typical list of such drugs would include:

Bartiburates, Cinchophen, Cantharides (for internal use), Sulfapyridine, Aconite, Colchicine, Chrysarobin or Goa Powder, Emetine, Radium, Phenobarbital and Derivatives, Neocinchophen and other Cinchophen Derivatives, Aminopyrine, Sulfathiazole, Benzedrine Sulfate (for internal administration), Chrysophanic Acid, Phosphides, Thiocyanates, Sulfanilamide, Thyroid, Colchicum, Phosphorus.

And the anthelmintic drugs:

Tetrachlorethylene, Wormseed oil (Chenopodium Oil), Carbon Tetrachloride (for internal use), Male Fern (Aspidium), Santonin, Thymol.

Proceedings of House of Delegates

Oklahoma State Medical Association

May 19,20—Oklahoma City, Oklahoma

The following transcripts of the two meetings of the House of Delegates, in Oklahoma City, May 19 and 20, have been edited. All actions by the House of Delegates have been included, but should any members of the Association desire more detailed information, it will be furnished by the office of the Executive Secretary, 210 Plaza Court, Oklahoma City.

MONDAY, MAY 19, 1941

The House of Delegates of the Oklahoma State Medical Asssociation convened in the Silver Glade Room, Skirvin Tower Hotel, Oklahoma City, Monday, May 19, at 8:30 P.M., Dr. J. D. Osborn, Speaker of the House, presiding.

Upon being called to order, the Credentials Committee —Dr. W. A. Howard, Chelsea; Dr. P. M. McNeill, Oklahoma City; and Dr. V. C. Tisdal, Elk City—announced a quorum present and upon motion duly seconded, the report of the Credentials Committee was adopted.

The Speaker next announced the appointment of Sergeant-at-Arms and the Reference Committee as follows: Sergeant-at-Arms—Dr. G. L. Johnson, Pauls Valley; Dr. C. E. White, Muskogee, and Dr. R. C. Pigford, Tulsa; Reference Committee—Dr. H. K. Speed, Sayre, Dr. M. H. Newman, Shattuck; and D. H. O'Donoghue, Oklahoma City.

Following these appointments, the Chair called for the reading of the minutes of the last meeting and the special session, and upon motion by Dr. L. S. Willour, McAlester, and adoption by the House, the reading of the minutes was dispensed with since they had previously been published in the Journal of the Association.

Following this order of business, the Speaker called for the reports of officers as provided in Chapter VII, Section 3, of the By-Laws, and Dr. Henry H. Turner, Oklahoma City, President of the Association, gave the report of the Council which was accepted.

Following the report of the Council, the Speaker called for reports of the Councilors of the Association and requested that a motion be made to accept the reports of Councilors—Dr. O. E. Templin, Alva, District No. 1; Dr. A. S. Risser, Blackwell, District No. 3; and Dr. Shade D. Neely, Muskogee, District No. 8—as their reports had been published in the April issue of the Journal. The requested motion was placed by Dr. McLain Rogers, duly seconded and carried.

Following this action, reports of the Council Districts by the Councilors were given with the exception of reports by Dr. John A. Walker, Shawnee, District No. 7, and Dr. Donald A. Angus, Lawton, District No. 5, who had been appointed by the Council to serve the unexpired term of Dr. Walter A. Hardy of Ardmore. Dr. Angus was excused from making a report inasmuch as he had served for only a few weeks.

On the completion of the reports of the Councilors, the Speaker called for the next order of business which was reports of the Standing Committees. The following committees reported: Publicity, Judicial and Professional Relations, Public Policy, and Scientific Work. The reports of these Committees, with exception of the Scientific Work Committee, were approved as printed in the April Journal. The report of the Scientific Work Committee was given verbally by the Chairman, Dr. C. R. Rountree, Oklahoma City, and following the report, the Speaker addressed the house upon the exceptionally fine program as arranged by this Committee and called for a vote of appreciation which was duly recorded.

Following the reports of the Standing Committees, were reports of the Special Committees. Special Committees reporting were Conservation of Vision, Postgraduate Medical Teaching, Necrology, Study and Control of Cancer, and Medical Economics. These Committee reports were accepted as published in the April Journal, and the discussion of the report of the Medical Economics Committee was augmented by a discussion of the report by the Chairman, Dr. Horace Reed, Oklahoma City, and the Executive Secretary, Mr. R. H. Graham. Following the completion of the reading and discussion of the reports, the Chair entertained a motion for their adoption which was duly put and accepted.

After the acceptance of the reports, Dr. L. S. Willour requested, in the form of a motion, that the Necrology report be given reverence by a moment's standing silence in honor of those who had passed to their great reward.

The next order of business was the introduction of amendments to the Constitution and By-Laws. The Speaker of the House called upon the Vice-Speaker, Dr. P. P. Nesbitt, Tulsa, to assume the Chair and Dr. Nesbitt, upon taking the Chair, called for proposed amendments to the Constitution and By-Laws. At this time, Dr. James Stevenson of Tulsa was recognized for the purpose of introducing amendments to the By-Laws and introduced the following amendment:

Chapter III, Section 2, Subsection (b), of the By-Laws be amended to read as follows: "The House of Delegates may be called into and convene into special session only under the conditions provided in Article VII, Section 3, of the Constitution."

Chapter IX, Section 1, of the By-Laws shall be amended to read as follows: "Credentials; Annual Session; Scientific Work; Public Policy; Medical Education and Hospitals; Publicity; and Judicial and Professional Relations."

Chapter IX, Section 2, of the By-Laws shall be amended to read as follows: "The committee on Annual Session shall be composed of the President, President-Elect and Secretary-Treasurer. All other standing committees designated in Section 1 shall be composed of three (3) members who shall be appointed by the President subject to approval of the Council for a term of three (3) years, and until a successor has been appointed and qualified — appointments being staggered so that there shall be only one appointed in any one year unless a vacancy shall occur, which shall be filled by the President for the unexpired term of the vacancy."

Chapter XI, Section 3, Subsection (a), of the By-Laws shall be amended to read as follows: "When a member in good standing of a component county society, except members who are in the United States Service, State Health Service, or one whose employment makes his residence in any community temporary, moves to another county in the state, he shall be given a written certificate of his membership by the Secretary of his county society without cost. This certificate shall accompany application for membership in the county society in the county to which the member has moved. Pending action on the application, such member shall be considered in good standing in the society from which he was certified. In case of rejection, the applicant may appeal for relief to the Council; appeal must be made in writing and must be delivered into the hands of the Council not more than thirty days (30) days following date of notice of rejection. Consideration of the appeal shall be given by the Council at the earliest convenient time possible, not more than ninety (90) days shall elapse following the date the appeal has been received by the Council until a hearing shall be given to the applicant and to the component county society, and the action taken by the Council on the appeal shall be final. Under no circumstances shall membership be

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retained in a component county medical society for a period longer than one (1) year following the issuance of a certificate of removal."

Following the introduction of these amendments by Dr. Stevenson, the Chair called for further amendments and since no other Delegate requested the floor for the purpose of the introduction of amendments, the Chair advised that, in compliance with the Constitution and By-Laws, these amendments would necessarily have to lay over until the next day before they could be adopted or rejected.

The Speaker next recognized Dr. Maurice J. Searle, Tulsa, and Dr. Searle extended to the House of Delegates an invitation for the 1942 Annual Meeting of the Association to meet in Tulsa. Upon motion of Dr. G. L. Johnson, properly seconded, the invitation of the Tulsa County Medical Society was accepted.

At this time, the Speaker of the House, Dr. J. D. Osborn, resumed the chair.

The next order of business to come before the House of Delegates was the adoption of the budget of the Association. The report was given by the Secretary-Treasurer, Dr. L. S. Willour, and upon his motion, seconded by Dr. A. S. Risser, the budget, as read, was unanimously adopted.

Following the adoption of the budget, dues of the Association for 1942 were considered, and upon motion of Dr. J. S. Fulton of Atoka, seconded by Dr. Risser, dues for 1942 were set at $10—this amount being the same as had been in effect the previous year. Following the adoption of the motion establishing the dues for 1942, Dr. Finis W. Ewing of Muskogee was given the floor for the purpose of discussing membership in the Association for those doctors who are now in the Military Service. Dr. Ewing pointed out that many of the doctors now in Military Service were previous members of the Association but had not renewed their membership by paying their dues for 1941. Dr. Ewing then moved that the action of the House in adopting Dr. Fulton's motion be amended to the extent that all doctors, who have been called into Military Service and have been inducted, be made members of the Association upon the payment of annual dues in the amount of $4. Dr. Ewing's motion was seconded by Dr. G. L. Johnson and carried unanimously.

Following this order of business, Dr. Henry H. Turner, Oklahoma City, Chairman of the State Medical Preparedness Committee, was recognized for the purpose of discussing the Second Request of the American Medical Association on Medical Preparedness. Dr. Turner requested that this discussion be given by the Executive Secretary, Mr. Graham, and the discussion of this particular problem dealt with the manner and procedure of filling out, by the County Societies, the questionnaires sent from the executive office at the request of the American Medical Association. Item 6 and 7, which related to the naming of the minimum number of doctors who were necessary for the operation of Hospitals, Public Health Departments, etc., and likewise necessary for the preservation of civilian population, were the questions most commonly either not answered or given an evasive conclusion. It was pointed out that this was necessary information, and that while it was regrettable that such a procedure was deemed essential, all effort by the County Societies to comply with the request should be made. The question was discussed at great length by the Delegates and upon completion of the discussion, the following motion by Dr. C. K. Logan of Hominy was duly seconded and adopted. Motion: "That those reports that are unsatisfactory be returned to the County Societies, and that they be asked for another report."

The next order of business was the introduction of resolutions. All resolutions introduced were referred to the Reference Committee, and the report of the Committee and action of the House of Delegates on these resolutions will appear in the minutes of the second day.

The Speaker, following the introduction of resolutions, recognized the Executive Secretary who read the names of members of the Association who had been nominated by the County Societies for Honorary Membership. Those nominated were as follows: Dr. J. W. Browning, Geary; Dr. C. E. Wann, Albany; Dr. P. L. Cain, Albany; Dr. C. E. Sexton, Stillwater; Dr. Calbert H. Beach, Glencoe, (deceased); and Dr. E. M. Harris, Cushing. Upon motion of Dr. C. H. Haralson of Tulsa, and duly seconded, the House elected three members to Honorary Membership.

Following the election of the Honorary Members, Dr. O. E. Templin, Councilor of District No. 1, requested the House of Delegates to instruct the Delegates of the Association to the American Medical Association to place the name of Dr. E. P. Clapper of Waynoka before the House of Delegates of the American Medical Association for election to Affiliate Membership. The motion was made by Dr. Templin that the Delegates be so instructed, and upon being duly seconded by Dr. Risser, the motion carried.

Following the action on Dr. Clapper, the Speaker of the House requested the attention of the Delegates for the purpose of explaining the Annual Registration Act which would be in force July 1. Dr. Osborn pointed out the protection given the public in the enactment of this law and the different effects that it would have on the practice of medicine in Oklahoma. Dr. Osborn produced numerous exhibits which clearly brought out the discrepancies and laxity in the present pursuits of the practice of medicine, which the Act would tend to eliminate, and urged all of the Delegates, upon returning to their respective County Societies, to see that the intents and purposes of the Act were explained to the local membership and full cooperation given the Board of Medical Examiners.

Following this discussion, the meeting adjourned at 11:45 P.M., and the Speaker announced that the House would reconvene the next morning at 8:30 A.M.

TUESDAY, MAY 20, 1941

Pursuant to the announcement of the Chair on the previous day, the House of Delegates of the Oklahoma State Medical Association convened at 8:30 A.M., Silver Glade Room, Skirvin Tower Hotel, Oklahoma City.

Following roll call by the Credentials Committee, the Committee announced a quorum present. Upon motion by Dr. F. W. Boadway of Ardmore, properly seconded, the report of the Credentials Committee was adopted.

The Speaker opened the meeting by drawing the attention of the Delegates to the special effort made by the General Committee to make the commercial exhibits exceedingly attractive and expressed the hope that all members would take sufficient time to visit these exhibits.

The next order of business was the reading of resolutions which had been introduced at the preceding session and referred to the Reference Committee. The Speaker recognized Dr. H. K. Speed of Sayre, Chairman of the Reference Committee, and Dr. Speed requested that the Executive Secretary, Mr. Graham, give the report of the Committee. The Chair next recognized Mr. Graham, and all resolutions recommended by the Reference Committee were adopted. The resolutions adopted are as follows:

State Health Department

"The House of Delegates in this 49th Annual Session desires to express thanks and appreciation to the Oklahoma State Health Department and the Children's Bureau of Washington, D. C., for their liberal financial support, making possible the postgraduate instruction program in Obstetrics and Pediatrics in the State of Oklahoma.

It is the judgment of this House of Delegates, from numerous reports throughout the State, that hundreds of physicians in our medical profession have benefitted by reason of these courses.

Further, that a copy of this resolution be sent to Dr. Grady F. Mathews, Commissioner, Oklahoma State Health Department; also a copy to the Children's Bureau, Washington, D. C.

SIGNED: Henry H. Turner, M.D."

Commonwealth Fund

"The House of Delegates in this 49th Annual Session desires to express thanks and appreciation to the Commonwealth Fund of New York for their liberal financial support, making possible the postgraduate instruction program in Obstetrics and Pediatrics in the State of Oklahoma.

It is the judgment of this House of Delegates, from numerous reports throughout the State, that hundreds of physicians in our medical profession have benefitted by reason of these courses.

SIGNED: Henry H. Turner, M.D."

Medical Preparedness

"BE IT RESOLVED BY THE OKLAHOMA STATE MEDICAL ASSOCIATION, that WHEREAS, The United States and its entire citizenship is now being called upon to supply the needed manpower to protect the government, and

WHEREAS, It is the duty of every citizen of the United States to render an individual service so that the combined action of the people of this Government may carry on all the necessary functions for defense, and

WHEREAS, The number of physical and mental rejections of selectees under the Selective Service Law, throughout the entire nation, has been far above that which normally would be expected, and WHEREAS, the young men of Oklahoma between the ages of twenty-one and thirty-five years have been rejected by the armed forces for causes which, in many instances, are of such nature that can be corrected, and, in some instances, if suitable physical examination and ethical, professional medical advice is given prior to the examination, the selectee would be able to pass the physical examinations required by the Selective Service System;

NOW, THEREFORE, BE IT RESOLVED that the House of Delegates, convened in its annual session on this 20th day of May, 1941, offer to the people of Oklahoma coming within the confines of the Selective Service Law, the professional knowledge of the entire membership of the Oklahoma State Medical Association so that the manpower of Oklahoma who are patriotic, loyal, American citizens and unable to finance the prehabilitation and the rehabilitation of their physical defects may have the necessary medical and surgical service.

BE IT FURTHER RESOLVED that we call upon the various hospitals of the State to lend every possible aid, and most respectfully request the Governor of the State of Oklahoma, the Honorable Leon C. Phillips, the Commissioner of Health, Dr. Grady F. Mathews, and other Departments of State, to cooperate to the fullest extent."

Medical Students and Selective Service

"WHEREAS, The National Selective Draft Board has left the status of the Medical student draftees to the discretion of the individual State Draft Boards and;

WHEREAS, The American Medical Association and its component parts, the various State Medical Associations, are devoting their efforts to National Defense and have volunteered their services as an organization and;

WHEREAS, A number of physicians over the State and Nation have already been called into military service and the need for more doctors in the Army is increasing, leaving a threat of insufficient number of doctors at home, and;

WHEREAS, Under the modern system of medical education the medical student of today is required to compete with many in order to be selected to enter a medical school and;

WHEREAS, The training these medical students are receiving in school as potential doctors is of far more importance to National Defense than one year of military service offered in the Draft;

BE IT RESOLVED, That the Oklahoma State Medical Association request the Oklahoma Selective Service Draft Board to give proper consideration to the need of maintaining adequate medical services in Oklahoma by deferring all Medical Students and Interns who are satisfactorily pursuing their course of study and training and who will ultimately likely be practicing physicians and surgeons."

Specialties Board

"WHEREAS, There are many organizations interested in health and medical preparedness;

WHEREAS, These organizations represent various specialties interested not only in the prevention but the treatment of disease; and

WHEREAS, Many recommendations and plans for medical preparedness will be made by these groups; therefore be it

RESOLVED, That the Oklahoma State Medical Association concur in the resolution adopted by the Committee on Medical Preparedness of the American Medical Association, and that the Oklahoma State Medical Association recommend to the President of the United States and to the National Defense Commission, through its Senators and Representatives, the immediate appointment of a medical coordinator of the activities of all medical service related to the national defense program."

Medical Education in National Emergency

"WHEREAS, The maintenance of the health of the nation is fundamental to its welfare; and

WHEREAS, The education and training of medical personnel requires long periods of time and special selection of men and women qualified to undertake such study; and

WHEREAS, It is necessary for such purposes to maintain continuous education of medical students; therefore be it

RESOLVED, That the Oklahoma State Medical Association concur in the resolution adopted by the Committee on Medical Preparedness of the American Medical Association and requests the National Defense Commission, the military and naval services, the United States Public Health Service and the Congress, in preparing for the conscription of personnel, to provide for the continuation of medical education and for exemption from conscription of all medical students and interns in accredited nad approved institutions."

State Medical Society of Wisconsin

"WHEREAS, The House of Delegates of the Oklahoma State Medical Association has been advised that on September 10, 11 and 12, 1941, there will be convened in Madison, Wisconsin, the One Hundredth Anniversary Meeting of the State Medical Society of Wisconsin.

NOW THEREFORE BE IT RESOLVED, That the House of Delegates of the Oklahoma State Medical Association express congratulations to the State Medical Society of Wisconsin on this Anniversary and commend the Wisconsin Society for the place it has played in American Medicine and also for its diligent perusal of better medical services for the people of Wisconsin because of its having always exerted its effort for their protection in matters of health and welfare."

Following the adoption of these resolutions, final action was taken on the amendments to the By-Laws introduced at the previous session. Upon motion of Dr. L. S. Willour, duly seconded, the amendments, as read, were adopted.

The next order of business was the election of officers.

The Speaker announced that the first election would be that of Delegate to the American Medical Association to serve for 1941-1942. Dr. C. W. Arrendell, Ponca City, nominated Dr. A. S. Risser, Blackwell, and there being no further nominations, upon motion of Dr. A. H. Bungardt, Cordell, the nominations were closed, and Dr. Risser was elected by acclamation.

The Speaker next called for nominations for President-Elect and recognized Dr. H. C. Weber of Bartlesville. Dr. Weber placed in nomination the name of Dr. J. D. Osborn of Frederick. There being no further nominations, Dr. G. L. Johnson moved that the nominations be closed and that Dr. Osborn be elected by acclamation. The nomination was properly seconded and carried.

Following his election, Dr. Osborn made the following

remarks to the Delegates: "Gentlemen: It is rather difficult for me to believe that you are sincere in asking me to make a speech when, by force of circumstance, you have listened to me for four years. But I would be ungrateful indeed if I didn't take this opportunity to express to you my sincere thanks and deep appreciation for the honor you have bestowed upon me. I do consider it an honor to be elected at the head of an organization such as the Oklahoma State Medical Association, and I sincerely thank you. I can only promise you that I will do my dead level best to make you proud of your selection."

Following the election of President-Elect, nominations were in order for Vice-President. Dr. G. L. Johnson nominated Dr. F. W. Broadway of Ardmore, and Dr. James Stevenson of Tulsa nominated Dr. C. R. Rountree of Oklahoma City. Dr. H. K. Speed then moved that the nominations cease, and before action was taken upon Dr. Speed's motion, Dr. Broadway requested Dr. Johnson to withdraw his name as nominee for Vice-President. Dr. Johnson acquiesed in Dr. Broadway's request, and upon motion of Dr. L. S. Willour, the Secretary cast a unanimous ballot for Dr. Rountree as Vice-President.

Following the election of Dr. Rountree as Vice-President of the Association, nominations were in order for Secretary-Treasurer. The Speaker recognized Dr. T. H. McCarley of McAlester, who nominated Dr. L. S. Willour to succeed himself. Before other nominations could be made, Dr. Willour asked for the privilege of the floor, which was accorded him, and he addressed the House of Delegates in the following manner: "Gentlemen: I have served on the Council for twenty-five years as a Councilor, President-Elect, President, and since the death of Dr. Thompson as Secretary-Treasurer. I have enjoyed this service throughout all the years, and I have tried to serve you as well as I knew how. Since the establishment of a full-time executive office and the employment of a full-time Executive Secretary, there have been many marked improvements in the Oklahoma State Medical Association. Mr. Graham is doing an excellent job. He has the support of the Council of the Association. No longer is there any work for the Secretary-Treasurer to do except that of keeping the minutes of the Council and the House of Delegates, and this is done by the Executive Secretary. All books and records are kept in the executive office. All the work that is now connected with the office of Secretary-Treasurer is that of writing the checks which correspond to the vouchers that are sent to him. Since there has been an Executive Secretary, it has been necessary that all vouchers be sent to McAlester, and the checks then sent back to Oklahoma City. This consumes much time and is rather awkward and inconvenient. There is one important thing, however, connected with the office of the Secretary-Treasurer and that is that he becomes a member of the Council. Gentlemen, I am not going to have my name before this House as a candidate for Secretary-Treasurer. I have served this State Association for twenty-five years, and I think that is quite long enough. To have a Secretary-Treasurer outside Oklahoma City is indeed very awkward and inconvenient. I should like to withdraw my name as a nominee for the office of Secretary-Treasurer but I do thank Dr. McCarley for nominating me (I have been associated with him since 1910, and we are very close and intimate friends). Again I should like to say that I do not wish my name to come before the House of Delegates, and in withdrawing my name, I should like to place in nomination a man from Oklahoma City—that of Dr. L. J. Moorman, for Secretary-Treasurer."

Acting upon Dr. Willour's request, Dr. McCarley withdrew the nomination of Dr. Willour as a nominee for Secretary-Treasurer. The chair then recognized Dr. H. K. Speed who moved that the nominations be closed and Dr. Moorman be elected by acclamation. The motion was properly seconded and carried.

Since the next order of business was the election of Councilors for Districts Nos. 3, 4 and 5, the Speaker requested the House to be at ease while the Delegates from these Councilor Districts prepared the nominations for Councilors from their respective districts.

During the recess, the Chair recognized Dr. McLain Rogers, the retiring Delegate from the Association to the American Medical Association, and Dr. Rogers made the following remarks concerning his retirement as Delegate: "I congratulate the State Association for their selection of Dr. A. S. Risser as Delegate to the American Medical Association. It is a proud memory to enjoy the confidence of a responsible position. I am very happy indeed to see this fine gentleman selected in my stead. I sincerely hope that I will not lose my enthusiasm, and that I may continue to work with the men of this Association as I have in the past. It is not all fun in being a Delegate to the American Medical Association. A Delegate, although he does go to the Convention with his expenses paid, if he does his duty, works hard continuously for three days. He is, by that time, tired out and barely has an opportunity to view the exhibits. I do feel, however, that the man who goes as a Delegate should certainly have the support and confidence of the State Association that he is representing, and I do think the precedent of continuing a man in service is a splendid thing. National problems are continually coming before the House, and I think, it is of necessity, that men who represent you Nationally should be at many of your officers meetings. I sincerely hope that you will give Dr. Risser your whole-hearted support along with your other Delegate, Dr. Howard, who is able and active. I thank you for all the courtesies that have been extended me by the Association. I am sure that I have had more honors than are rightfully mine. I like work and have all my life, and it is indeed a happy feeling with me to see some good come of the great cause—the principles of medicine."

Following these remarks by Dr. Rogers, the Chair recognized Dr. Finis W. Ewing, and Dr. Ewing responded to Dr. Roger's remarks by saying: "Personally, I think this Association would indeed be very careless of one of its obligations if we did not express our appreciation to the man who has so long and so ably represented the Oklahoma State Medical Association as a Delegate to the American Medical Association. We have just reason to be proud of all those who have represented this State Association as a Delegate to the American Medical Association. We are continuing to send outstanding men in sending Dr. Risser to the A.M.A., but Dr. Rogers, with his long service not only in the House of Delegates of the American Medical Association but his work in connection with the Association, has indeed been appreciated. He has been active and useful; his advice and counsel have always been profitable; and there is no reason to compare one man's services with another, but there is not a more useful man in medicine in Oklahoma or in any other state than Dr. McLain Rogers. At this time, I should like for this House of Delegates to acclaim him a very, very useful man."

At the conclusion of Dr. Ewing's remarks, Dr. James Stevenson of Tulsa requested the floor and made the following observation concerning Dr. L. S. Willour's faithful service on the Council of the Association: "I quite agree with everything Dr. Ewing has said about Dr. Rogers. We do indeed appreciate his long term of service. I also want to say a word or two about a man who has had a long term and deserves great praise. This man fought for the State Association in early times when the Association was a thing depending, at times, on the soul efforts of one, two, or three loyal members of the Association. I sincerely think that a man who has devoted twenty-five years of his time and ability to the activities of the Association is also due acclaim for it, and I so request it for Dr. L. S. Willour." This appreciation was duly expressed to Dr. Willour.

At this time, the Delegates from Councilor Districts Nos. 3, 4 and 5 advised the Chair that their nominations for Councilors were in order, and Dr. A. S. Risser of

Blackwell nominated Dr. C. W. Arrendell of Ponca City as Councillor from District No. 3; Dr. L. R. Kirby of Okeene nominated Dr. Tom Lowry of Oklahoma City as Councilor from District No. 4; and Dr. F. W. Broadway of Ardmore nominated Dr. J. I. Hollingsworth of Waurika as Councilor from District No. 5.

Following these nominations, Dr. L. S. Willour moved the election of these doctors as Councilors. The motion was seconded by Dr. Risser and carried.

Following the election of Councilors, Dr. H. K. Speed, Chairman of the Reference Committee, was recognized by the Chair and explained that due to an oversight a matter had been presented to him, not in the form of a resolution but one which he thought the House of Delegates should give earnest consideration, and asked that Dr. Henry H. Turner be recognized to explain the request. Dr. Turner, upon being recognized, stated that the Vital Statistics Bureau of the Public Health Department desired to make an exhaustive study on the causes of death that may have been influenced by pregnancy or childbirth, that the matter had been brought to the attention of the Committee on Maternity and Infancy of the Association, and their approval had been given. Dr. Turner further explained that all death certificates mailed to the Bureau of Vital Statistics, which might give as the cause of death a situation developed by pregnancy or childbirth, would be investigated, and the doctor signing the death certificate would be sent a questionnaire to fill out which would aid in the study of the causes of death by the Committee on Maternal Mortality of the Children's Bureau, and that all doctors returning the completed questionnaire would be paid $2. Dr. Turner moved that the House of Delegates approve this procedure and cooperate with the Public Health Department in futhering this study. The motion was duly seconded and carried.

The Chair next recognized Dr. O. E. Templin who, as Councilor for District No. 1, requested that the House of Delegates (as provided in Chapter IV, Section 3, of the By-Laws) delete from District No. 1 Major County and place it in District No. 3 inasmuch as there is an insufficient number of doctors in Major County to maintain a county organization, and that the doctors of the county belonged to the Garfield County Medical Society which is in District No. 3. Dr. Templin further explained that due to road conditions it was more or less impossible for the doctors in Major County to affiliate with another county society in the first district. Dr. Templin's motion was substantiated by a second, and the Speaker announced that this would call for a two-thirds vote and requested the Delegates to rise until counted by the tellers. Following the count, the Chair announced that the motion carried.

At this time, Dr. Osborn, as Speaker, addressed the House of Delegates by saying that since he had just been elected President-Elect that he did not feel that he should serve as both President-Elect and Speaker of the House even though his term as Speaker did not expire for one more year, and requested that the House of Delegates accept his resignation. The House acquiesed in the Speaker's request, and the Speaker next called for nominations for a Speaker of the House to serve the unexpired term. Dr. F. W. Broadway of Ardmore nominated Dr. H. K. Speed of Sayre, and Dr. W. Albert Cook of Tulsa nominated Dr. P. P. Nesbitt of Tulsa. Nominations were then closed on motion of Dr. O. E. Templin, and a count of the ballots gave the election to Dr. Nesbitt.

The Chair next recognized Dr. Turner, retiring President of the Association, and Dr. Turner spoke briefly in the following manner: "I want to thank each and every one of you for the honor that you bestowed upon me last year in being elected President of your Association. I also want to thank you for the fine and excellent cooperation extended me by the membership of the Association during the year of my administration. I should also like to express to you my sincere appreciation for the cooperation and assistance you have given me as your State Medical Preparedness Chairman in completing the questionnaires on medical preparedness that have been forwarded by the American Medical Association. In regard to the Second Request of the American Medical Association, I know each County will meet the request to the best of its ability. As brought out in the discussion last night, it is our duty to assume this obligation. I should also like to congratulate the other retiring officers as I know, from the very close association with them during the past year, they have done a very wonderful job. I want each and every one of you to know that, in the future and at any time, if I can be of service or assistance to any of you, all you have to do is to call upon me. Being your President has been an honor for which I shall always be grateful."

Following Dr. Turner's remarks, Dr. Maurice J. Searle of Tulsa was next recognized and paid tribute to Dr. W. Albert Cook of Tulsa for his services in the past as Delegate to the American Medical Association.

At this time, the Speaker advised that since Dr. Nesbitt had been elevated to the Speakership of the House that Dr. Nesbitt desired to tender his resignation as Vice-Speaker, which resignation was accepted, and the Speaker called for nominations to fill this vacancy. Dr. F. W. Broadway placed in nomination Dr. H. K. Speed of Sayre. Dr. L. S. Willour moved that the nominations be closed and that Dr. Speed be elected by acclamation to fill the unexpired term of Dr. Nesbitt. Dr. Willour's motion was seconded and carried.

Following the election of Dr. Speed, the Chair announced that the desk of the Speaker was cleared and unless some of the Delegates had other business to be transacted a motion for adjournment was in order. Dr. W. S. Larrabee of Tulsa moved the House adjourn. Motion was seconded and carried.

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ASSOCIATION ACTIVITIES

AMERICAN MEDICAL ASSOCIATION HOLDS NINETY-SECOND ANNUAL SESSION

Thirty-seven Oklahoma doctors attended the 1941 Session of the American Medical Association, held in Cleveland, Ohio, June 2-6.

Oklahoma doctors attending included: William H. Bailey, Ray M. Balyeat, Coyne H. Campbell, Anson L. Clark, C. A. Gallagher, Ephraim Goldfain, Wayne M. Hull, William K. Ishmael, Hugh Jeter, Everett S. Lain, John H. Lamb, R. B. Murdock, Ralph E. Myers, Horace Reed, John W. Riley, Henry H. Turner, Lois Lyon Wells, W. K. West and J. P. Wolff, all of Oklahoma City; O. H. Cowart, Bristow; Isadore Dyer, Tahlequah; W. A. Fowler, Norman; W. D. Hoover, O. C. Armstrong, Leo Lowbeer, Ivo V. Nelson, R. C. Pigford, George R. Russell, Victor K. Allen, and H. Boyd Stewart, all of Tulsa; W. A. Howard, Chelsea; J. Holland Howe, Ponca City; Ray H. Lindsey, Pauls Valley; Arthur S. Risser, Blackwell; Charles M. Siever, Picher; W. C. Thompson, Stillwater, and Donovan Tool, Edmond.

Dr. Henry H. Turner, Oklahoma City, was again present in the Scientific Exhibits with his exhibit on Clinical Use of Testosterone Propionate.

Dr. Hugh Jeter and Dr. C. H. Epps, Oklahoma City, likewise participated in the Scientific Exhibits with a study on the Diagnostic Value of Paracentetesis and Other Aspiration Fluid Examinations.

In the Scientific Section, Oklahoma was represented by Dr. John Lamb, Oklahoma City, who read a paper before the Section on Dermatology and Syphilology. Dr. Lamb's paper was a report on "Cancer of the Lower Lip in 318 Cases." Dr. Lamb also participated in the moving-picture section showing "Technique on the Insertion of Interstitial Radium Needles."

Dr. W. A. Howard, Chelsea, and Dr. A. S. Risser, Blackwell, Oklahoma Delegates, were early arrivals and attended all meetings of the House of Delegates.

Two annual elections of extreme importance and interest are the elections for the Distinguished Service Award and President-Elect: Nominees for the Award, as presented by the Committee on Awards, were Dr. James Ewing, New York; Dr. Simon Flexner, New York; and Dr. Ludvig Hektoen, Chicago. Dr. Ewing received a majority of the votes, and will be the recipient of the award for 1941. Dr. Fred W. Rankin, Lexington, Ky., was the only nominee for President-Elect and received the unanimous vote of the House. Other officers elected were Dr. Charles A. Dukes, Oakland, Calif., Vice-President; Dr. Olin West, Chicago, Ill., Secretary; Dr. Herman L. Kretschmer, Chicago, Ill., Treasurer; Dr. Harrison H. Shoulders, Nashville, Tenn., Speaker of the House of Delegates; and Dr. R. W. Fouts, Omaha, Nebr., Vice-Speaker of the House of Delegates. Trustees elected were Dr. Ernest E. Irons, Chicago, Ill., and Dr. Charles W. Roberts, Atlanta, Ga.

Pan American Meeting In 1941

In line with Western Hemisphere solidarity, the Council on Scientific Assembly recommended that the 1942 Session, to be held in Atlantic City, be designated as a Pan American Meeting. Representatives from all South and Central American Countries, Mexico, Cuba, Puerto Rico, and Canada will be invited to attend and participate in the scientific program.

Resolutions Adopted

The following resolutions adopted by the House of Delegates, which are of major importance and interest, may be read in their entirety in the June 14 and 21 issues of the Journal of the American Medical Association. In brief, the contents of these resolutions are as follows:

The staffs of hospitals training interns shall have physicians especially trained in pathology, radiology, anesthesiology and physical medicine in charge of these departments, and that they shall be members of the hospital staff with voice and vote.

That a Committee from the American Medical Association be appointed to confer with the American Hospital Association and the Catholic Hospital Association concerning medical services offered by prepayment hospitalization plans as they may pertain to physician-patient relationship.

That, in view of the declared National Emergency, the United States Government arrange immediately for the establishment of a central authority with representatives of the Civilian Medical Profession to be known as the Procurement and Assignment Agency for Physicians for the Military Forces, Public Health Service, and the Civilian and Industrial need of the nation.

That the Scientific Program include a Section on General Practice. An experimental session to be held in 1942, and if successful in point of attendance and interest to become a permanent section, if approved at the 1942 Session.

A motion was unanimously adopted applauding and appreciating the spirit of the American Medical Women in offering of their services to the United States Government.

Changes In Constitution and By-Laws

Two amendments to the Constitution and By-Laws were introduced. The amendment to the By-Laws changing Chapter XV, Section 1, Item 7, from Section on Pharmacology and Therapeutics to Section on Experimental Medicine and Therapeutics was adopted. An amendment to the Constitution amending Article VI, Section 1, to provide for eleven trustees instead of nine, as now provided, will be acted upon at the 1942 Session.

Executive Session

An Executive Session of the House of Delegates was held Tuesday afternoon, June 3, for the purpose of hearing a report from the Board of Trustees concerning the Indictment and Trial of the American Medical Association and others for the restraint of trade in the District of Columbia. (Page 2791 A.M.A. Journal). The delegates voted unanimously to recommend to the Board of Trustees that the attorneys of the A.M.A. appeal the judgment based on the verdict of guilty in the case of the United States vs. the American Medical Association et al.

The last day of the House of Delegates found four cities bidding for the 1944 Annual Session. Invitations were received from New York, Philadelphia, Atlantic City and St. Louis. The Board of Trustees reported on the facilities available in these cities for the handling of the Convention, and upon the first ballot, the city of St. Louis was selected for 1944.

The complete minutes of the Cleveland Session have been reported in the June 14 and 21 issues of the Journal of the American Medical Association.

Classified Advertisements

FOR SALE: A good drug store in a town of 650 inhabitants with a surrounding territory of about 15 miles, which offers an excellent opportunity for medical practice. Also, one of the best stretches of farming land in Southeastern Oklahoma.

Any physician interested in the store, the land and the practice may correspond with Mrs. Nancy V. Fuston, Bokchito.

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STATE HOSPITAL ASSOCIATION TO ISSUE MONTHLY BULLETIN

One of the greatest forward steps ever taken by the Oklahoma State Hospital Association is the announcement by the Board of Trustees that in the future the Association will issue monthly a publication to be known as the "Bulletin of the Oklahoma State Hospital Association."

The Bulletin will be used for the purpose of keeping the membership advised of activities of the Association as well as the problems and responsibilities facing the hospitals, not only of Oklahoma but of the nation. Pertinent articles on hospital management will be monthly features and will be particularly valuable in as much as they will be of a local state nature.

The Bulletin Committee, as announced by the Board of Trustees, includes Mr. J. Q. Bush, Jr., Bone and Joint hospital, Oklahoma City; Mr. R. L. Loy, Jr., Oklahoma City General Hospital, Oklahoma City, and Mr. Walter R. McBee, Group Hospital Service, Tulsa.

Every hospital in the state eligible for membership should not only give financial support to the Hospital Association by becoming a member but should take an active part in participating in its activities and an interest in the Bulletin.

Membership is $10 a year, and correspondence concerning membership should be addressed to Mr. J. O. Bush, Jr., Secretary, Oklahoma City.

Dr. S. N. Mayberry (1867-1941)

Depriving the Association of one of its most beloved members and the Garfield County Medical society of one of its oldest physicians and surgeons, death claimed Dr. S. N. Mayberry, Enid, June 22.

Doctor Mayberry had been a member of the medical profession in Garfield county since September 16, 1893, when the Cherokee Strip was opened. First located at Waukomis, he moved from there to Enid in 1899.

He completed his medical education at Garfield university (now Friends university) in Wichita, Kan., and was graduated also from Washington university in St. Louis. He began his practice of medicine in Mount Hope, Kan.

In Garfield, county, he was known to have established the first hospital in Enid. Then, in 1908, he built the University hospital in Enid. Recently, he was recognized as the oldest physician in years of service on the Santa Fe, Frisco and Rock Island railroads; he had been local surgeon for the system for 35 years.

Always active in the Association, Doctor Mayberry had been on programs of the American Medical Association in numerous places, and when the visiting Doctors clinic was organized at Rochester, Minn., he was chosen as its first president.

Doctor Mayberry was born in New Sharron, Iowa, but moved to Mount Hope when he was a small boy.

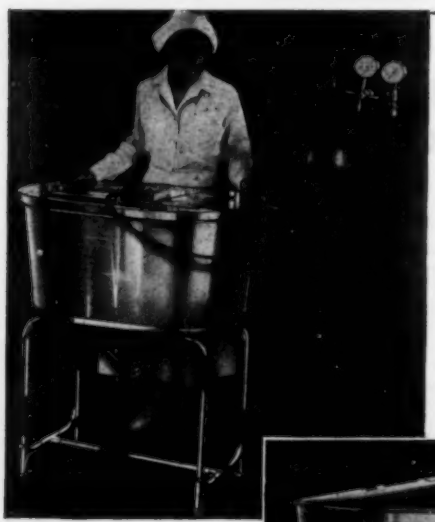
He is survived by his wife, a daughter, Mrs. Dean Bell; a son, Edward Mayberry; four grandchildren Jennie Ann and Richard Bell and Jane Alice and S. N. Mayberry, III; a brother, George Mayberry, and a twin sister, Mrs. Frank Lamar, all of Enid; and two other sisters, Mrs. Alice Barrick, Enid, and Mrs. Gertie Veil of California.

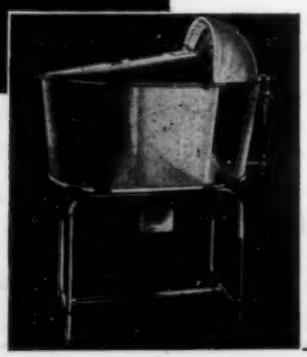
G. E. X-Ray Staff Marks Six Months Anniversary in New Offices

The first day of August will mark a six months anniversary for the staff of General Electric X-Ray Branch Corporation in their new headquarters at 627 N. W. 10th Street, Oklahoma City.

The new offices, opened February 1, include a new display room and offers parking facilities. The corporation has access to all hospitals and clinics in Oklahoma City.

The same staff, under the management of Mr. Charles Bohan, is serving the public.





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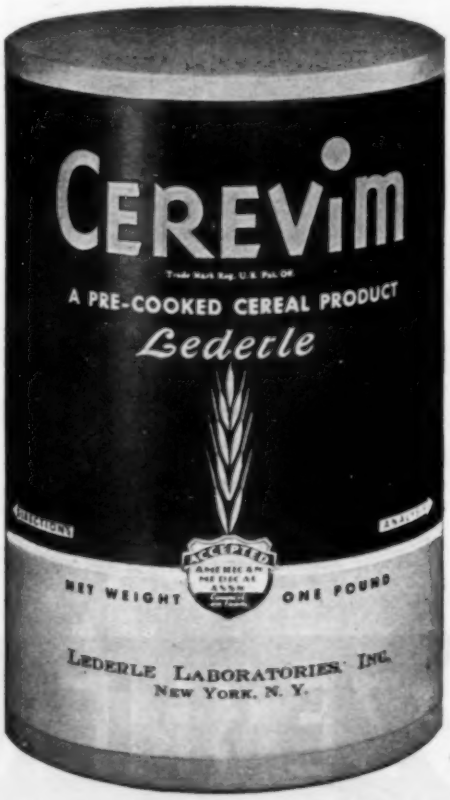

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*JOSLIN, C. L. and HELMS, S. T., Arch. Ped., 54:533 (Sept.) 1937

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Dr. Edmund Sheppard Ferguson
(1871-1941)

Dr. Edmund Sheppard Ferguson was born at "Maplehurst," Port Stanley Ontario, Canada, on the 13th day of June, 1871, and died at Oklahoma City on June 28, 1941. He was the son of Sarah Shearer Ferguson and Dugald Ferguson. A brother, Robert D. Ferguson still lives on the family homstead, and a sister, Mrs. Ethel F. Campbell, relict of Dr. Spurgeon Campbell, are the only survivors of his immediate family.

Dr. Ferguson had two sons, E. Gordon Ferguson, son of Ella Robinson Ferguson (deceased). He is associated with the firm of Ferguson and Wails. Another son, John Haven Ferguson, the son of Marie Haven Ferguson (deceased) is an attorney and now living in New York City.

Dr. Ferguson was graduated from St. Thomas Collegiate Institute in 1890; the St. Thomas Normal School in 1891, and Wayne University School of Medicine in 1895. He did post-graduate work in the Ear, Eye, Nose & Throat Infirmary in New York City, 1900-01; University of Vienna in 1910.

He came to the United States in 1892, and was naturalized in 1901. He practiced medicine in Cameron, Texas until 1904, when he came to Oklahoma City and limited his practice to his specialty.

In 1905-06 he was instructor in minor surgery at the Epworth University College of Medicine. When the Epworth College of Medicine was incorporated, Dr. Ferguson was appointed Professor of Ophthalmology and Otolaryngology from 1907-10. In 1910-11 the University of Oklahoma School of Medicine was absorbed with the Epworth College of Medicine, and he was appointed Professor of Ear, Eye, Nose and Throat. In September 1911, at the first meeting of the faculty, Dr. Ferguson was chosen as secretary of the faculty. In 1924 he was elected Professor of Ophthalmology and served as head of that department. On October 10, 1935, he resigned as Secretary of the faculty. On September 1, 1938, he was made Emeritus Professor of Ophthalmology.

He was one of the founders of the Oklahoma City Academy of Medicine, and President of that body in 1913, and again in 1927. He was on the staff of St. Anthony's, Wesley and Oklahoma City General Hospitals, as a consultant in Ophthalmology.

He was a Fellow of the American College of Surgery, serving on the committee on credentials, the International College of Surgeons, a member of the American College of Ophthalmology, and certified by the American Board of Ophthalmology and Otolaryngology.

He was past president of the State Medical Society, was on the County committee to determine those necessary for home defense.

He was a member of the Oklahoma Club, Oklahoma City Golf & Country Club, Lotus Club, Oklahoma County and State Medical, and the American Medical Association. He was a member of the Nu Sigma Nu College fraternity, belonged to the Presbyterian Church, and was a Mason (32nd degree).

Dr. Ferguson lived the allotted three score years and ten. Each year had not carved away a bit of the fullness of his mental and physical vigor, leaving only the shell of his former self, as Holmes has said. He was always interested in manly diversions, interspersing his continued interest in medicine, with hunting and fishing. He had just returned from a short fishing trip on the White River, and was in Alaska on a fishing trip last summer. He made at least one hunting trip a year, and sometimes more.

He loved people, had a host of devoted friends. He was a wise physician, a good citizen, a devoted husband, a fond father, and true friend. How fortunate it was that after a well rounded life, when the shadows of evening were lengthening, he was taken so suddenly, when he would have had such a restive old age.

The rapid and fatal executioner (coronary occlusion) saved him from that, and enabled his family and friends to remember him as he always was, without any incursion on his disposition or activites, which Time invariably registers on every one of our organs.

"To lose a friend is the greatest of all evils—
But endeavor rather to rejoice that you possessed him,
Than to mourn his loss."
Epistulae ad Lucilium. (Seneca).

A Resolution of the Oklahoma County Medical Association—July 1, 1941.

Whereas:—

The Almighty, in his infinite wisdom, has called from our midst our beloved friend and co-worker, Dr. Edmund Sheppard Ferguson, who, although three-score years and ten, was still full of vigor and vitally interested in his work, and who departed this life in the midst of great activity, and lived a full life to the very end.

Therefore Be It Resolved:—

The the medical profession has lost one of its best beloved and most valuable members.

His superior ability, his fine personality and spirit of friendliness, his great interest and concern for his patients and his friends made his life most lovable and influential, and an inspiration to others to do better work, and to uphold the ideals of the medical profession.

And Be It Further Resolved:—

That while we bow in sorrow to the will of the Omniscient, we are deeply appreciative of this wonderful man, physician, scientist, teacher and friend, and his far-reaching influence which will continue to inspire us to carry on our duties to Humanity.

We bid Goodnight to his labors, and Good Morning to his honor and glory.

And Be It Further Resolved:—

That we extend our deepest sympathy to the members of his family in this, their greatest bereavement, and that these resolutions be spread upon the minutes of the Society, and that a copy be sent to the members of his family.

Dr. Charles D. Johnson
(1892-1941)

Tulsa county and the state lost a distinguished member of its medical world when Dr. Charles D. Johnson, Tulsa, died June 22 after a long illness.

Born in Downs, Kan., Doctor Johnson was graduated from Northwestern State Teachers' college, Alva, in 1904, from the University of Oklahoma in 1907, and from the St. Louis university medical school in 1914. He served on the faculty of that medical school for several years.

In 1910, he came to Tulsa, where he became active in the Tulsa County Medical society, serving on legislative and other committees. During his years of practice, he built for himself a reputation as the greatest medical authority on the treatment of appendicitis in Oklahoma.

His survivors are his wife, two daughters, Maxine Lee and Phyllis Johnson; his mother, Mrs. L. J. Johnson, and a brother, C. B. Johnson, all of Tulsa; and four sisters, including Cleda Frank Russell, Tulsa.

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2% Lactic-acid milk .... 18 ozs.
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NEWS FROM THE COUNTY SOCIETIES

When members of the Woodward County Medical society and their wives met June 12 at the Western Oklahoma hospital, Supply, they were greeted with a dinner made up of foods grown or manufactured at the hospital.

Following the dinner, Dr. C. R. Rountree, guest speaker from Oklahoma City, talked to the society on new methods of treating fractures. He illustrated his talk with pictures.

Meanwhile, wives of the members were taken on a tour of the occupational therapy department and other hospital buildings.

About 25 doctors and their wives were present at the meeting, which was presided over by Dr. H. L. Johnson. After the meeting, the society adjourned until September.

Eight members of the Muskogee county society joined members of the Sebastian county, Arkansas, society in Fort Smith May 30.

The Muskogee county society members who attended this meeting in Arkansas included Dr. Charles Ed White, Dr. Finis W. Ewing, Dr. Shade D. Neely, Dr. F. G. Dorwart, Dr. H. A. Scott, Dr. E. H. Coachman, Dr. H. T. Ballantine and Dr. J. T. McInnis.

July 3, the Muskogee society will hold its annual round-up picnic on the ranch of Dr. Charles Ed White.

A round table discussion of "The Diagnosis and Treatment of Appendicitis" was held at the meeting of the Creek county society, June 10 in Sapulpa.

About ten members were present at the meeting, which closed the series of meetings for the society until next fall. The meetings will begin again, October 14 in Bristow.

Dr. T. D. Rowland and Dr. Paul Gallaher, both of Shawnee, were the speakers at the meeting of the Pottawatomie county society, June 21 in Shawnee.

The subject of the program that evening was "The Local Use of Azo-Sulfonamide and Its Derivatives."

Preceding the program, the 20 members present were entertained at a chicken dinner. Members will meet again July 19 in Shawnee, with Dr. J. E. Hughes in charge of the program.

Dr. Ellis Moore and Dr. Joseph W. Kelso, both of Oklahoma City, were guest speakers at a meeting of the Blaine county society, June 20 in Watonga. About ten members were present.

Doctor Moore read a paper on "A New Operation for Hemorrhoids," and Doctor Kelso gave a talk, illustrated by lantern slides, on "The Vaginal Historectomy."

Following dinner and the program, the society adjourned until September 3, when members will meet again in Watonga.

The Jefferson county society also held its last meeting of the season, June 9 at Waurika. About seven members were present, and topics of a general nature were discussed. The society will resume its meetings in October.

Members of the Logan county medical society also heard Dr. Ellis Moore's paper on "A New Operation for Hemorrhoids," when the society met June 16 at the Cimarron Valley hospital, Guthrie.

Members also heard a talk, "Plastic Surgery Problems," given by Dr. George H. Kimball, Oklahoma City.

Following the program and a short business meeting, the society adjourned until September.

Dr. Halsell Fite and Dr. Pat Fite, both of Muskogee, were the guest speakers, June 20, at the Pittsburg county society meeting at the Albert Pike hospital, McAlester.

Dr. Halsell Fite illustrated his talk on "My Experiences in Trans-Urethral Prostatic Resection" with x-rays. Dr. Pat Fite spoke on "The Nailing of Intra-Capsular Fractures of the Neck of the Femur."

Before adjourning for the summer, the society voted to make a contribution to the National Physicians committee. Members will resume their meetings in September.

Dr. Roy L. Smith Is Re-Elected Chairman of Secretaries Group

Dr. Roy L. Smith, Tulsa, was re-elected to serve as Chairman of the Annual Secretaries' Conference of the Oklahoma State Medical Association, at the second meeting of the conference, May 21 in the Skirvin hotel, Oklahoma City. Twenty-one secretaries attended the meeting, which was held during the Association's Annual Session.

The election of officers followed luncheon. Other officers elected were Dr. Rush L. Wright, Vice-President, Poteau, and Dr. Shade D. Neely, Secretary-Treasurer, Muskogee.

A Constitution and By-Laws governing the conference were then adopted. Copies of the final draft of these will be mailed to county secretaries in the near future.

Following the business meeting, Dr. J. D. Osborn, Secretary-Treasurer of the Oklahoma State Board of Medical Examiners, Frederick, discussed the Annual Registration Act.

Before adjournment, the group decided to hold their Third Annual Secretaries' Conference during the Oklahoma City Clinical conference.

Doctors Will Receive Railway Quiz Book

Of interest to members of the Association is the announcement that the Atchison, Topeka and Santa Fe Railway System will distribute to physicians over the state a new booklet, "Quiz," published by the Association of American Railroads.

As stated in the Foreword of the booklet, it is "dedicated to the curiosity of the American people."

Facts about the railway industry, its organization, history, size capitalizations and many other of its phases, are given in the booklet in the form of questions and answers.

It will be a helpful addition to every doctor's collection of books.

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[1] Cooke, R. A., and Stull, A.: *J. Allergy* 4: 87, 1933.

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BOOK REVIEWS

"The chief glory of every people arises from its authors."—Dr. Samuel Johnson.

SYNOPSIS OF MATERIA MEDICA, TOXICOLOGY AND PHARMACOLOGY. By Forrest R. Lavison, Ph. D., pp. 633, The C. V. Mosby Company, 1940. Price—$5.00.

A concise review of Applied Pharmacology, Therapeutics and Toxicology which may be of value for the physician or nurse requiring a ready reference.

The material is treated in a stilted style with no attempt at the use of newer methods of classification. The classification presented is merely a restatement of those available in most of the older classics in Pharmacology. References are presented which are inaccessible since the reader wishes not a large bibliography, but a quick method of being able to refer to a particular subject.—B.E.A.

SHOCK: BLOOD STUDIES AS A GUIDE TO THERAPY. By John Scudder, M.D., Med. Sc. D., F.A.C.S. 55 Illustrations, Five Plates three of which are in color. 323 Pages. Price $5.50. J. B. Lippincott Co., Philadelphia, 1940.

The subject is presented in four parts; PART ONE is "Historical and Experimental." The historical sketch covers etiology and theories, including: Vasoconstriction, Capillary Congestion, Toxemia, Loss of Circulating Fluid, Neurogenic, and Adrenal Exhaustion. Blood changes in shock are reviewed, especially stressing the changes in potassium concentrations and its toxic effect on cardiac and smooth muscle. The results of experimental shock are presented; these results were obtained from 28 animals in which shock was produced by various means. While the data usually shows an increase in blood potassium during shock, the degree of increase is not an indication of survival time. Methods of preserving blood for transfusions are well presented especially stressing the toxic effect of potassium which may result when the base diffuses from the red cells. Methods for retarding such diffusion of potassium are discussed.

PART TWO deals with "Varieties of Shock—Their Analysis and Treatment." This section opens with "Advances in Treatment of Shock," which the author apparently considers to be synonymous with the administration of "Cortical Extract and Salt." This treatment was administered to patients suffering from shock which had been caused by various agencies. Complete case histories are presented covering the laboratory findings and treatment in detail. In the analysis of 27 such cases the author includes the following statement: "This combination has proved beneficial, particularly, in those cases which were not responding to the usual forms of therapy." Part two closes with a summary of the work and is expressed in 21 points. The following two seem most significant: "Experimental evidence, based on 28 cats, reveals alterations in both hemoconcentration and blood potassium in shock; this inspissation of the blood usually precedes an increase in potassium," and "To state that shock is due to potassium poisoning alone is fallacious. That alterations in potassium in both the blood and body fluids serve as a measure or profound cellular changes is probably more correct."

PART THREE "Historical Development and Bibliography." In this section the author again turns to history and lists in chronological order the "concepts and treatment of shock," from 1492 to the present. The same is done under the "physiologic and toxicologic effects of potassium" and again on "some of the function of the adrenal glands." This furnishes a lengthy bibliography of 533 references.

PART FOUR, "Laboratory Manual," is limited to eight pages covering the technique and equipment used in determining hematocrit, specific gravity of blood, plasma and serum. It is surprising that the determination of potassium has not been mentioned.

Since much of the volume is devoted to history it is unfortunate the author offers it without any critical analysis or interpretation. Had the author chosen to discuss the mechanism of shock production it would have been necessary for him to include several outstanding papers which he has omitted from the bibliography. The book offers a splendid evaluation of the possible role of potassium in shock.—E.C.M.

Hygeia Advises On "Eating Ice"

"Many persons experience bowel cramps and gas in the abdomen when they eat or suck ice," Hygeia, The Health Magazine says in answer to an inquiry as to whether eating or sucking ice is injurious to health.

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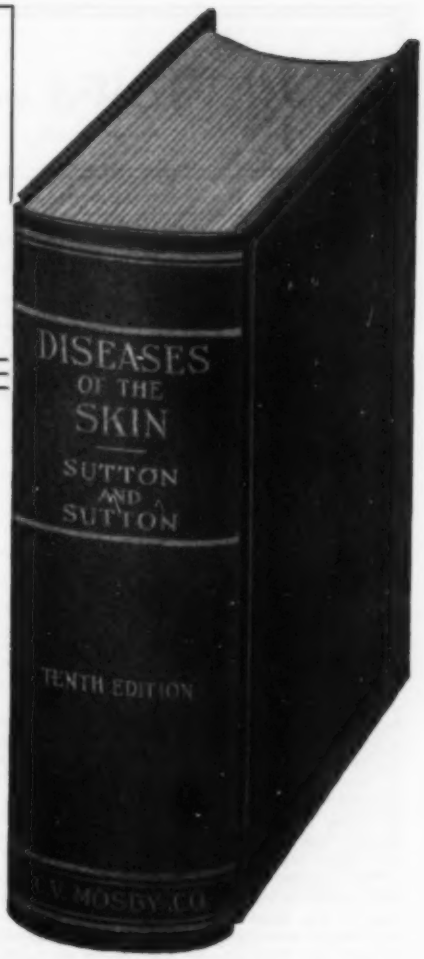

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REVIEWS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
714 Medical Arts Building, Oklahoma City

"Total Thyroidectomy in the Treatment of Diabetes Insipidus." Harry Blotner, M.D. and Elliott C. Cutler, M.D., Boston. The Journal of the American Medical Association, June 21, 1941, Page 2739, Vol. 116, No. 25.

Considerable advance has been made in recent years in the physiology of the thyroid gland in relation to the other organs of internal and of external secretion. However, during the past 45 years, clinicians have reported improved elimination of water in certain forms of nephritis by the administration of desiccated thyroid and more recently of thyroxine, alone or combined with soluton of parathyroid. No explanation for the effects noted has been forthcoming beyond the possibility that these drugs increase the mobilization and excretion of calcium.

From a review of the literature, it appears that there is a relation between the thyroid and pituitary glands and that the thyroid gland is a factor in maintaining water balance and possibly plays a role in the regulation of the intake and output of fluid in patients with diabetes insipidus. It appeared to the authors that it might be of value to apply this knowledge clinically in the treatment of diabetes insipidus. They, consequently, performed total thyroidectomy in the year 1935 on three patients with diabetes insipidus. This article reports the results obtained on these patients after a five years interval.

The general plan of study included various observations made in each case before and after total thyroidectomy. The fluid intake and urinary output were measured daily for many months and periodically after the operations. The specific gravity of the urine was measured at intervals during the day. The basal metabolic rate was determined on 38, 40 and 64 occasions in the respective cases. The plasma or serum was analyzed on many occasions for sugar, cholesterol, nonprotein nitrogen, protein, albumin, globulin, chlorides, calcium and phosphorus. The hemoglobin, red blood cell counts and hematocrits were determined.

The authors summarize their results as follows:

Total thyroidectomy was done on three patients with diabetes insipidus who have been observed for five years since operation. The patients studied had acquired the disease many years previous to their investigations, and consisted of one elderly woman whose diabetes insipidus was idiopathic and two young men whose disease was associated with postencephalitic Parkinson's disease.

Total thyroidectomy relieved the diabetes insipidus in the two cases of postencephalitic origin and also improved the Parkinson's disease. Total thyroidectomy had no effect on the diabetes insipidus of the first patient, whose disease was idiopathic. However, they believe that this patient has accessory thyroid tissue because of her normal basal metabolism, the lack of symptoms and signs of myxedema and because of the levels of cholesterol and iodine in the blood.

The administration of thyroid, when not recently preceded by dinitrophenol, re-established the polyuria and polydipsia, but these were not as severe or as persistent as they had been before total thyroidectomy. The diuretic effect of thyroid appears somewhat specific, in the nature of a diuretic principle, and is not due particularly to its ability to raise the basal metabolism. This was suggested by the occurrence of an increased intake and output of fluid while the metabolism was still low after thyroidmedication, and by the comparative response of the water exchange to dinitrophenol and to thyroid.

Their studies of the thyroid gland in two cases indicate some hyperactivity of the gland. It is suggested that the thyroid gland plays a part in the clinical aspects of diabetes insipidus.

The evidence in their studies justifies the application of total thyroidectomy in cases of diabetes insipidus associated with postencephalitic Parkinson's disease.

LeRoy D. Long.

"The Local Use of Sulfanilamide." Lawrence W. Long, M.D., and J. Gordon Dees, M.D., Jackson, Miss. Surgery, June 1941, Vol. 9, No. 6, Page 878.

The subject of the application of sulfanilamide crystals to wounds of the body made by trauma or by the surgeon is a subject which is growing in importance, particularly with the vast number of casualties that are appearing in the present war as well as the increasing number of auto accidents.

The authors use sulfanilamide because it is more soluble than sulfapyridine or sulfathiazole. Its concentration in the blood shows that it is picked up more rapidly than the other two of this group.

They divide proper usage of sulfanilamide locally into office use and hospital use.

The types of cases treated in the office are those of local infections, small lacerations, boils and abscesses, and the lesser types of injuries in which powder is placed in the wound and sewed up without drainage. If the infection and injury seem to be serious enough, sulfanilamide is given by mouth in addition to the local use. When the ointment is indicated in office treatments, they use equal parts of sulfanilamide crystals and lanolin thoroughly mixed, preferring the anhydrous types of sulfanilamide ointment because it seems to be more readily absorbable than that placed in petrolatum.

Their hospital treatment consists of: (1) Crushing and lacerated injuries, in which the wound is thoroughly debrided, after scrubbing and preparation of the area, and dusted with sulfanilamide powder, being closed without drainage.

(2) Compound fractures, in which the patient is treated for shock, after which there is thorough preparation of the injured part with soap and quantities of sterile water, debridement, apposition of the fractured extremity, and, if the fractures cannot be aligned and held properly in place, the placing of vitallium metal screws and plates into the bone to hold the fractures in situ. They place 20 Gm. of sulfanilamide powder into the fracture site both beneath and on top of the periosteum and the subcutaneous area. Proportionately smaller amounts are used for children. The wound is closed without drainage and a plaster of Paris splint applied to immobilize the part. Some of these patients have showed "sulfanilamide fever," which has subsided when the drug was discontinued by mouth.

(3) Carbuncles, the treatment of which has been satisfactory in their hands by the use of intravenous anesthesia, thorough incision with the radioknife, removal of the infected tissue by electrocoagulation, and packing with sulfanilamide powder. They have found that this procedure is usually followed by freedom from pain and sepsis.

(4) Local abscesses, treatment of which with incis-

ion and drainage and daily applications of sulfanilamide powder dusted into the cavity has shortened the duration of the infection and apparently aided materially in the cure.

(5) Appendical and pelvic abscesses, which have been treated successfully without drainage by incising and irrigating the abscessed cavity, placing 20 to 30 Gm. of sulfanilamide powder into the abscess, and closing the abdomen without drainage. The rate of absorption from such walled-off cavities is much slower than in fresh denuded areas or in the peritoneum itself.

(6) Peritonitis, which locally following acute appendicitis has been treated successfully by dusting the sulfanilamide powder into the peritoneal cavity, and which generally has been treated with sulfanilamide in the peritoneal cavity with drainage with marked success. These authors have treated 51 such cases with one death. They make the point that the absorbability of the drug is proportional to the peritoneal reaction that is present.

(7) Prophylactic use in abdominal and pelvic surgery, in which all cases of chronic salpingitis, hydrosalpinx, supravaginal hysterectomy, and tubo-ovarian abscess with removal are treated by the use of sulfanilamide powder dusted into the area of the pelvis. They have noticed that closure of the stump of the cervix has not resulted in any complications where this procedure has been followed. They also feel that the use of the drug locally is advantageous as a prophylactic measure following any gastro-intestinal surgery with soiling of the peritoneum.

They have found that the maximum concentration in their cases has been 19.5 per cent. The minimum concentration has been 1.9 per cent. The effectiveness of the drug is lost if and when concentration falls below 1 mg. per cent. In their opinion the ideal concentration desired is from 6 to 10 mg. per cent.

They conclude that sufficient concentration in the blood can be obtained in conditions requiring the use of the drug locally. Autoclaving destroys the effectiveness of the drug. Its rate of absorption is dependent upon the vascularity of the area in which it is placed. They have noted no complications that might be due to the use of the drug.

LeRoy D. Long.

"The Treatment of Abnormal Uterine Bleeding With Androgens." Udall J. Salmon, M.D., Samuel H. Geist, M.D., Joseph A. Gaines, M.D., and Robert I. Walter, M.D., New York, N. Y. American Journal of Obstetrics and Gynecology, June 1941, Vol. 41, No. 6, Page 991.

This is a very comprehensive article upon the subject of the treatment of abnormal uterine bleeding with androgens. The authors report their experience, extending over a three year period, with 61 cases of abnormal uterine bleeding treated with testosterone propionate. They give their recommendations as to the optimal dosage, safeguards to be employed in order to avoid the masculinization phenomena, some theoretical concepts in regard to the cause of functional bleeding and the physiological role of androgens in the human female and, lastly, a preliminary report on the value of newer testosterone products and androgen implantation.

"It seems to us to be both illogical and unnecessary to seek, in animal experiments, a rationale for the use of androgens in the treatment of abnormal uterine bleeding, when a physiological basis for their use can be found in the biogolic effect which testosterone evokes in human females. Thus it has been shown that testosterone propionate, if given in sufficient amounts to woman, inhibits the secretion of gonadotropic hormone by the hypophysis, suppresses ovulation and menstruation and abolishes temporarily the normal proliferative and secretory phenomena of the endometrium, reducing the latter to a state of involution."

In their series of 61 patients there were 45 cases of functional bleeding, 15 cases of meno-metrorrhagia associated with uterine fibroids, and one case of adenomyosis of the uterus. Good primary therapeutic results were reported obtained in 97.7 per cent of the cases of functional bleeding. Apparent cures with follow-up varying from 3 to 32 months were obtained in 66.6 per cent, moderate improvement in 26.6 per cent and failure in 6.8 per cent of the cases.

The results in patients with uterine fibroids were not satisfactory. The primary results were good in 87 per cent but symptoms recurred after discontinuation of treatment in 60 per cent of the cases.

In the one patient with menorrhagia and adenomyosis of the uterus, the menorrhagia was controlled under treatment, but there was a complete recurrence of the excessive bleeding after discontinuation of testosterone propionate.

It is therefore the recommendation of the authors that testosterone propionate be used in the treatment of menorrhagia or meno-metrorrhagia of "functional" origin, or in association with small intramural fibroids. The results from such treatment are likely to be unsatisfactory if the abnormal bleeding is associated with submucous fibroid tumors.

This recommendation for the use of testosterone propionate in such instances of bleeding is restricted with the caution that the patient must be carefully followed with vaginal smears, and in this series they also had frequent endometrial biopsies. The danger of androgenic therapy lies in the possible masculinizing phenomena which may occur. It is the author's experience that involutional changes in the vaginal mucosa, as demonstrated by vaginal smears, and atrophic changes in the endometrium, as found in endometrial biopsies, will always precede masculinization phenomena. It is therefore important that at least vaginal smears be carefully followed and at the first sign of decided involutional changes, the treatment be discontinued or reduced prior to the onset of any masculinization symptoms.

In their series of 61 patients, 13 exhibited side-effects. "A number developed masculinization phenomena, viz., slight hirsuties of the face and extremities (five cases), deepening of the voice (six cases), and enlargement of the clitoris (three cases). In five instances, slight acne appeared on the chest, back, and face. A few patients developed all three symptoms, i.e., hoarseness, hirsuties and acne. With but one exception, none of these complications occurred in patients receiving less than 500 mg. The exception was a patient who developed slight acne and hirsuties after 315 mg."

It is consequently the author's opinion that smaller dosages carry very little risk of masculinization and that smaller doses combined with repeated vaginal smears makes the possibility of masculinization symptoms extremely small.

In accordance with the above ideas, the authors make suggestion of optimal dose of 300 mg. per month in patients with marked bleeding, given in single intramuscular injections of 25 mg. three times weekly. "Vaginal smears should be taken twice weekly and, at the first sign of regressive changes, therapy should be discontinued. If there is no, or only slight, symptomatic improvement during the next menstrual period, a similar course of testosterone should be repeated the following month. If the first menstrual period is moderately improved, 150 mg. in divided doses may be given the following month. If the bleeding is reduced to approximately normal after the first course, a second course should be given the following month, reducing the monthly dose to 100 mg.

For patients with moderate degrees of menorrhagia or menometrorrhagia, 150 to 200 mg., in divided doses, for the first month, is usually adequate. It is advisable to supplement the first month's treatment with a second course the following month, using approximately half of the first monthly dose.

Patients that have shown a tendency to recurrence after an interval of normal menses for several months have been satisfactorily controlled with small doses, e.g., 10 mg., two or three times weekly, or 25 mg. weekly, given for four to six weeks."

The implantation of testosterone propionate was attempted in 22 patients but it appeared to be of little, if any, practical value as a therapeutic procedure.

After some discussion as to the physiological role of androgens in the human female, the following hypothesis is presented: "The androgens and gynecogens are thus pictured as being normally in a state of dynamic balance. If the equilibrium is upset in favor of the gynecogens, the resulting inbalance would give rise to dysmenorrhea, menorrhagia, or premenstrual tension; if in favor of the androgens, to oligomenorrhea, amenorrhea, and hirsuties."

Throughout the entire article, the authors frequently stress the importance of studying the cytological changes in the vaginal smears as a method of regulating the dosage.

COMMENT: This is an excellent piece of work covering a reasonably long period of time, and done by men of exceptional ability and sound judgment.

While there still remains considerable aversion to the use of androgens in the human female, and while there is still fear of undesirable masculinization effects, it would appear from such excellent studies as this that the androgens are of undoubted value in the treatment of so-called functional uterine bleeding. It is studies such as this one which will discover means of limiting the dosage in a particular patient so that the desirable effect may be obtained and the undesirable side-effects avoided.

Wendell Long.

"The Clinical Study of Estrogenic Therapy With Pellet Implantation." Daniel R. Mishell, M.D., Newark, N. J. American Journal of Obstetrics and Gynecology, June 1941, Vol. 41, No. 6, Page 1009.

This is a report on the effects of implantation of a single pellet of crystalline estrogens varying in weight from 45 to 65 mg., but averaging about 50 mg. in a series of 28 patients. The pellets were inserted in the subcutaneous tissue just above Poupart's ligament.

Of ten menopause castration cases, eight were relieved of all symptoms one week to ten days following implantation. There was one failure in a post-radiation case. The average dose was about 50 mg. and the average symptom-free period was 120 days.

Twelve patients with spontaneous menopause were treated with average dose 50 mg. The duration of symptom-free period in those patients observed for a sufficient length of time averaged five months.

Two cases of secondary amenorrhea had biopsies which showed evidence of a moderate proliferation of the endometrium as well as an increased amount of cornified epithelial cells in vaginal smears. However, implantation had no effect whatsoever upon the menstrual cycle.

Likewise, in three cases of primary amenorrhea there was no return of vaginal bleeding but the effect upon breast development in these cases was rather striking.

It was felt by the authors that this means of estrogen therapy by implanting 50 mg. pellets in the subcutaneous tissue was a safe and effective mode of therapy in cases of menopause.

It was considered more economical, and far more satisfactory to the patient than frequent intramuscular injections.

Wendell Long.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
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"Some Notes On the Treatment of Carcinoma of the Bronchus." F. C. Ormerod. The Journal of Laryngology and Otology, January, 1941.

In 1933 this author gave a preliminary report of 27 cases. Aetiological factors, symptoms and clinical signs were discussed. Four years afterward, a report of 100 cases was published. The application of radon was discussed. The dividing line between the carcinomata and the so-called adenomata is a field for much further investigation. In this present report there are additional cases reported which have been treated with radon. By 1939 the author had treated 100 cases in this manner. Now he has an additional 33 cases which have been so treated for a period of just under three years. The report of 1937 showed that by the radon treatment the expectation of life had been advanced from 3.5 months to 7.8 months. The additional 33 cases has reduced the expectation to 5.6 months. It would appear from the above that the results of the radon treatment has changed to the worse. Actually, this is not true because the cases were seen at an advanced stage. Many of the 33 were treated with the idea of palliation only and aimed merely at opening up the bronchus. During this period 16 cases were refused treatment, the cause being that they were so far advanced that the chance of any improvement was nil. The author says: "In treating such a disease as cancer of the bronchus, the increase of the average survival rate of cases of all types is perhaps not so immediately important as the very satisfactory results in individual cases." About the only indication of whether the patient is likely to respond to the radon treatment or not is the fact that has been learned by experience that the patient of over 60 years of age does not respond well. If there is a reasonable prospect of successful surgical removal, of course it is inappropriate to apply radon. About one-third of the patients referred to the author were considered not suitable for treatment on account of the advanced stage of the disease and not because of the suitability of possible successful surgical removal. The technique of the method of treatment is described, cases are reported in detail, x-rays are shown and pathological specimens demonstrated. Altogether, it is a concise handling of a difficult and so many times an unsatisfactory subject.

"Discussion of the Psychological Aspects of Deafness." Proceedings of the Royal Society of Medicine, 1941, Volume 34, April, No. 6, Page 309-319.

H. FREY says that the literature contains very little about the psychological aspect of deafness. The deaf are not a uniform group, and not every hearing loss means a deaf person. A deaf person is only that one with a hearing defect who feels this defect to be an impediment in private or occupational activity or in general enjoyment of life. The deaf-mutes form a separate community among the hearing people. Their isolation from the hearing world does not prevent them from entering successfully upon all the ordinary activities of life; in fact, they almost live the life of normal persons. Yet, they are often unable to adapt themselves to ordinary social life, and conflicts arise in which they show awkwardness of temper, petulance, aggressiveness and violence.

It is probable, however, that the mental anomalies seen in some of the deaf-mutes are due to factors other than deafness. On the other hand, most of the deaf-mutes are, from the outset, not quite normal people. The congenitally deaf are degenerate individuals, showing abnormalities of their central nervous system. Also in cases of deafness due to early meningitic affection, it may be assumed that the central nervous system has not survived the strain of the disease without lasting inferiority of function.

The deafened, as a rule, overestimate the extent of their deafness because of reasons psychological and physiological. The unilaterally deafened person believes that he is completely deaf in the impaired ear, because when a sound from one source reaches him, the weaker ear gets a weaker hearing impression. The sound is localized by the better ear, and the patient has the subjective feeling that only one ear is functioning.

Inefficient hearing occurs also among normal people, and more frequently among the deafened. The imperfections of the speakers further contribute to the fact

that the deafened overestimate the extent of their deafness. Moreover, since they try to hide their defects, they do not ask for repetitions of sentences or words not sufficiently well understood; they are also disinclined to use hearing aids and to study lip reading. By this, the deafened feels himself more and more excluded from the community of normal people, and he becomes an "inferior" person. A neurotic state then develops, produced by psychical trauma.

Many of the most depressed cases belong to the group of otosclerosis. The patients represent a special type of a highly nervous character and highly unstable vasometer conditions. It is quite possible that their preparedness for mental depression is to some extent due to their whole pathological condition and not just a normal reaction to their defects. It is peculiar that the general public never has as much pity for the deafened as for the blind. Indeed, the deafened is usually a comic figure in the literature and at the stage, because his defect is not generally considered as one which involves the "personality."

Experience proves, however, that quite a number of the deafened are able to regain their mental and moral equilibrium, even after years of mental sufferings.

A. B. STOKES: Among the deaf, anxiety occurs which may be of such degree that, judged by social conduct, it is abnormal. It will be found in that type of person who from birth has been timid or apprehensive. If the anxiety is associated with much visceral disturbance, a florid hypochondriasis results.

A depressive state may arise in a person who in earlier life has shown that type of response to situational factors involving stress. In his depression, he may show retardation of thought and action, and may be filled with gloom about his present and future. A schizoid response to deafness may be obtained in a person who has always seemed retiring. Similarly, according to the individual, hysterical, obsessional, or paranoid responses may develop. Yet, the number of deaf people at the psychiatric clinics is not larger than would be accounted for by their distribution among the general population. It is those of susceptible personality make-up who break down under the strain of deafness.

Hardness of hearing and the concomitant social situation represents a great burden, but particularly so to those who already before their deafness lacked strength in themselves. A specific response of the deaf is seen in those individuals in whom a paranoid reaction develops; such persons may believe that the conversations of others are about themselves.

The occurrence of deafness in children presents special problems. Trends of conduct are impeded in their social organization, while at the same time social stress is increased. Behavior problems, therefore, arise, which take their form according to the personality of the child. The lessening of the burden of deafness by the use of hearing aids, by lip reading, and by social adjustments will allow compensations to develop within the personality.

"Angiomatosis Retinae: With a Report of Four Cases in One Family Involving Six Eyes." L. Stal. Johannesburg. South Africa. The British Journal of Ophthalmology. April 1941. Vol. 25. No. 4. Page 167-179.

FUCHS was the first who described the condition of angiomatosis retinae in 1882. Later, WOOD, COLLINS, BEDELL, and others reported more cases. The affection is usually known as Coats' disease or Hippel's disease. LINDAU showed that it can be associated with (1) the presence of angioblastic cysts in the central nervous system, notably in the cerebellum, (2) the presence of cysts in the kidney and pancreas, and (3) the development of hypernephromata and tumors of the suprarenal glands.

The author observed four cases in a family, the mother, her daughter and two sons being affected. The mother's left eye was blind, with no perception of light. In the right eye there was massive exudate of the retina; the veins were enormously distended, and one disappeared into an angioma. Some vessels had beaded appearence, and beyond the angioma, the capillaries were dilated.

The daughter had an almost blind divergent right eye. There was a large retinal detachment the surface of which showed two areas of capillary nevi, and many newly-formed blood vessels. In the right eye of one son there was a pear-shaped retinal angioma. The other son also had an angioma in his left eye.

Such cases are treated by the suture of radon seeds to the sclera over the site of the tumor, but after such a treatment there is usually a danger of delayed macular degeneration. WE'VE recommended surface coagulation by means of the diathermy. This is almost the same as the treatment of retinal detachment.

"The Correction of the Errors of Refraction of the Eye by Means of Contact Lenses." Istvan Gyorffy. Budapest: Orvosi Hetilap. Budapest. April 19. 1941. Vol. 85. No. 16. Page 219-21.

The contact lens is a small shell-like eyeglass to be worn under the eyelids and immediately on the eyeball. It has many advantages, and is almost an ideal eyeglass. The idea of the contact lens is old. Already the physicist, HERSCHEL, had recommended it for the correction of the abnormal formation of the cornea, but in his time no one ever thought it possible that the eyeball could tolerate foreign bodies on its surface.

In the nineties of the last century there were again several investigators interested in contact lenses. FICK, an ophthalmologist of Zurich, MULLER, a medical student, and another MULLER, the manufacturer of artificial eyes, made such lenses, but their lenses were sphaerical and were not well tolerated by the rather ellipsoid surface of the eyeball. In 1920, the ZEISS company had already an entire set of contact lenses so that individual selection became possible. Yet, they were still sphaerical. Soon, DALLOS began to take moulds of the curvature of the eyeball, and the lenses prepared according to the individual mould were not only better tolerated but also better fitted and well adhering to the eyeball.

The contact lens eliminates the function of the normal cornea; it acts like an artificial cornea if the narrow space between the cornea and the glass is filled with a fluid the index of refraction of which is the same as the index of refraction of the cornea and the aqueous fluid. Since the optical effect of the contact glass depends on the curvature of its corneal portion, if this portion is adequately prepared, any kind of refraction anomaly can be easily corrected by means of the contact lenses. It is now possible to select a proper contact lens for any cornea so that the lens will correct not only the error of refraction but also ugly scars or abnormal protrusions of the cornea.

The contact lens is in contact only with the scleral portions of the eyeball; the cornea is not in touch with the glass. The lens follows the normal movements of the eyeball, and is not visible when worn. It does not change either the size of the eye, or its normal expression. Among its advantages, one mentions that it has not any of the untoward optical effects of a regular eyeglass, and the field of vision is just the same as for a normal eye. It never weighs more than 3 grammes, while some of the eye-glasses for higher degrees of myopia may weigh 40 or 50 grammes. The contact lens is well hidden behind the eyelid, and will not fall out of the eye and break. It does not become foggy in any weather.

Its disadvantage is that it is more expensive than a regular eyeglass, and does not last as long. One has to become used to it by wearing it only for a few hours a day, and it may take months until one is able to tolerate it in the eye for a full day. Yet, the therapeutic indications are such that nothing can replace contact lenses in certain errors of refraction. Irregular astigmatism and keratoconus are absolute indications for con-

tact lenses. Even in cases of high grade astigmatism or myopia the contact lens gives much better vision than the ordinary eyeglass. It is also indicated in unilateral aphakia, where it gives much better chances for the fusion of the aniseikonic retinal images than could be expected from an ordinary eyeglass.

Until now, the contact lenses were manufactured of glass. The author recently discovered that artificial resines can be used for making contact lenses. He now uses an ester of the methylacrylic acid for manufacturing lenses that are unbreakable. Their only disadvantage is that they are easily scratched during cleansing. He also mixed with the artificial resine the metal oxid of Neodym, and obtained colored lenses which will absorb the ultraviolet rays to which tourists or athletes are exposed at high mountains and during winter sports. All these show the possibility of a wide application of contact lenses.

"The Classical Symptoms of Vitamin A Deficiency and the Vitamin A Deficiency as a Systemic Disease." A. Pillat. Graz. Die Arztliche Praxis. Wien. April 1, 1941. Vol. 15, Heft 4, Page 61-65.

The deficiency in vitamin A produces its most prominent symptoms in the eye. It has not been long that we have known the three entirely different clinical pictures of night blindness, xerosis of the conjunctiva and keratomalacia, and that we recognized their common cause as deficiency in vitamin A. These are the classical signs of lack of vitamin A, and they should be considered three stages of the same disease. They also serve for the measurement of the severity and the duration of vitamin deficiency.

The earliest sign of deficiency is the night blindness or hemeralopia. The patient does not see well at twilight or at night, cannot find his way easily after sunset at a strange place, loses his direction even in his usual surroundings, falls easily over unseen objects, and needs a long time for adaptation of his eyes to darkness. Only the more severe degrees of night blindness are known to the patient himself; the milder types of hemeralopia can be detected only by the examination of the sense of light, and of the velocity of retinal adaptation by means of adaptometers.

Previously, one has distinguished between idiopathic and symptomatic hemeralopia, or hemeralopia due to retinal or choroidal diseases, to intoxications, etc. But there is only one type of hemeralopia: it is the one caused by deficiency in vitamin A. In this deficiency the retina is not supplied with sufficient vitamin needed for the formation and regeneration of the visual purple, the pigment so important for the function of retinal rods and cones. Looking at it, there does not seem to be anything wrong with a hemeralopic eye. The objective signs of deficiency can be elicited only by tests with the adaptometer and with the perimeter, which will show a concentric narrowing of the visual field for blue and yellow test objects.

If the hemeralopia and the vitamin A deficiency has kept on for a long time, epithelial xerosis of the conjunctiva will develop. In the civilized countries this xerosis is manifested only in a mild form as the so-called Bitot spots, which are nasalwards and temoralwards from the limbus; they are small, white, mostly triangular spots denuded from normal conjunctiva; under a magnifying glass they look like foamy masses of xerotic epithelial cells. The eyeball itself is not congested; it is rather pale, the paleness being caused by the lack of transparence of the diseased conjunctiva. Histologically, the xerosis is a hyper- and parakeratosis of the conjunctiva with deposits of keratohyalin granules in the epithelial cells and accumulation of fat in all layers. Biologically, the conjunctiva loses its character of a mucous membrane, and resembles more and more the epidermis.

It is not at all strange that conjunctival xerosis is found associated with such diseases as duodenal ulcus, steatorrhea, hepatic diseases, infectious diseases (measles, tuberculosis), endocrine affections (myxedema), ascaridiasis, etc. All the mentioned diseases use up a great deal of the vitamin A storage of the body.

Keratomalacia is rather frequent in malnourished or athrepsic children, but in tropical countries it occurs also among adults. The cornea exulcerates, and sometimes the entire cornea changes into a large ulcus. In some cases there is also hypopyon. Sooner or later the cornea perforates, and the eye becomes blind. In small children the disease has the clinical picture of a truly systemic disease: the children lose their appetite, have diarrheic stools, and may perish from bronchopneumonia. If they survive their sight will be lost from leukoma, or staphyloma of the cornea, or the entire eyeball may become atrophic. The keratomalacia is now considered a direct result of vitamin A deficiency.

To the three classical ocular symptoms of vitamin A deficiency may be added a fourth one called prexerosis by PILLAT. It is characterized by loss of lustre of the conjunctiva, dryness of the eye, decreased sensitiveness of the cornea, presence of xerosis bacteria and pneumococci in the conjunctival sac.

Retinal changes do not develop ordinarily, only after a long duration of the deficiency. There may be small spots on the periphery of the retina, but they are reversible under adequate therapy. The glands of the eye are also affected since they are epithelial tissues. There is a decrease in lacrimation. The ducts of the Meibomian glands become plugged with increased products of the cells, and chalazia may rapidly develop. The sebaceous glands of the eyelids also change similarly: their ducts will be obstructed by dry secretion, and produce comedoshordeola and abscesses.

The ocular symptoms were the first by which the vitamin A deficiency was recognized. Later, however, investigators found that vitamin A deficiency is a disease of the whole body, and changes develop on all epithelial coverings of the body: on the skin, its many glands and appendages (hair and nail), on the mucous membranes of the nose, the nasal sinuses, pharynx, larynx, bronchi, alveoli of the lungs, the epithelial surfaces of the intestines, urogenital tract, etc. It is, however, a false conclusion to consider every epithelial change the manifestation of vitamin deficiency, and to prescribe vitamins without further examination of the patients. Failure is certain to follow.

PLASTIC SURGERY

Edited by George H. Kimball, M. D., F. A. C. S.
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"Burns of the Hand." Donald W. MacCollun. M.D. May 24, 1941. Page 2.371. A.M.A. Journal.

The author stresses the importance of proper care of burns about the hands. He recommends that the patient be given a careful debridement if there is no shock present. Some individuals may be done under a morphine analgesia. The debridement consists of scrubbing the hands with a 50 per cent Green Soap and 50 per cent hydrogen peroxide. All blisters are opened and the raised dead skin is removed. In some cases the hair is shaved from the hands. The hands are then flushed with normal saline solution, then soaked in hexyl-resorcinol or a solution of merthiolate, and occasionally 70 per cent alcohol is used. The alcohol is painful if the patient is not asleep. It may destroy small islands of skin.

The author then states that one must decide on what type of dressings to employ. The author describes the use of both tannic acid and gentian violet or a combination of these with silver nitrate. He makes note that in children and in the cases that have all the finger surfaces burned, it is wise to use an ointment dressing. He also advocates splinting in certain cases.

In the late treatment of burns the patient is first of

all cleansed. Soaks every day or twice a day followed by dressings of tulle-gras are recommended. Over this are placed sponges wet with diluted sodium hypo-chlorite, chloremine-T, or eusol. In this way the unhealed surface is usually ready for grafting in a week or ten days. Split grafts are usually sufficient for covering of a raw surface. When there is contracture present, the author recommends release of the tendons, lengthening if necessary, and removal of the sheath in some cases. He advises excision of scar sufficient to restore function. The pedicle graft is necessary when one wants to restore the subcutaneous fat, plus the full thickness of the skin. The author recommends splinting of the hand over a period of six months following the use of free grafts.

Conclusions: The treatment of burns of the hand differs from the treatment of burns elsewhere on the body. An eschar can be used but only on hands that have not been burned completely. In complete burns an ointment should be used, accompanied by a rigid program of cleanliness and the systematic replacement of the fluid lost from the injured area. When the burns have not healed or there have been contractures from scarring, it is necessary first to diagnose exactly what tissue has been lost and to replace this loss with a similar type of tissue. Specific details outlined for the application of grafts to the hand have proved satisfactory both from a functional and from a cosmetic standpoint.

Comment: The author described in detail his procedure for the care of burns about the hands. He has noted the disadvantages of encasing burned hands in a tannic eschar. Recent experiences in the European war have led men to come to the same conclusion. They do not use tannic acid for the face or hands.

The author's use of splints in the early and late treatment of burned hands is very important. Also the stressing of the necessity of complete removal of scar in the case of contractures is a very important feature of the article.

The article is well illustrated by photographs and should be read in full by any one treating such cases.

CARDIOLOGY

Edited by F. Redding Hood, M. D.
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"Effort Syndrome." Sir Adolphe Abrahams, M.D. Lancet 240:437:438, April 5, 1941.

Graduated exercises are of therapeutic value in some cases, but basic causes and treatment are psychological.

Mobilization of adult males for army service brings to the surface many cases of effort syndrome which remain peacefully submerged in civilian life. The constitutionally inferior individual who suffers or says he experiences palpitation, tachycardia, exhaustion, giddiness and precordial pain on the slightest exertion, usually drifts to a physical level of existence of his own choosing. Under the urgent exigencies of war, such individuals are rudely plucked from their comfortable ways. What to do with them has been a problem since conscript armies have been used.

Because there is never anything organically wrong demonstrable by physicial examination, many recruits with effort syndrome are accepted into armies under the assumption that the regular life and exercise will benefit them. However, according to experience in the last war and this, Sir Adolphe Abrahams, M.D., of Westminster Hospital, London, England, observes that attempts at physical restoration of these individuals have been disappointing. It is his opinion that the causes and treatment of effort syndrome are the concern of the psychiatrist.

Graduated exercises combined with good food and regular life will benefit cases of postinfective debility or underdevelopment. Even in these cases psychological values are doubtless of importance. But effort syndrome is not explicable upon any of the many theories so far advanced. The symptoms are not due to myocardial weakness or vasomotor instability, either or both of which may be operative in producing like symptoms after severe infections.

There is no good evidence that chronic toxemia, infectious or otherwise, plays any part. If the net is cast sufficiently fine, the instruments of precision sufficiently exacting, it is possible to find some plausible abnormality in almost anybody. It is always well to eradicate an obvious source of sepsis, but the number of cases of effort syndrome which can be attributed to this cause is exceedingly small.

Hyperthyroidism is seldom a factor. At rest, the circulation of the hyperthyroidic patient resembles that of a normal person during exercise; exhibited are tachycardia, increased cardiac output and accelerated blood flow. These are absent in the patient with effort syndrome who also fails to exhibit that constant feature of hyperthyroidism, persistent tachycardia during sleep.

Normally, exercise produces slight acidosis, easily compensated by increased respiration and accelerated blood flow. The patient with effort syndrome gives the impression, not of dyspnea, but of lazy breathing; even at rest his respirations are shallow and ineffective. Hyperventilation has been offered as an explanation, but patients with effort syndrome cannot reproduce characteristic suffocation, palpitation and chest pains by hyperventilation.

To attempt to establish a uniform etiology for all cases of effort syndrome is fallacious. In typical cases the one universal factor is that of anxiety. The reason for fear in each individual is a task for the psychiatrist to discover.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D., F. A. C. S.
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"Fixation of Dislocations of the Acromioclavicular Joint and Rupture of the Coracoclavicular Ligaments." Gordon Murray. The Canadian Med. Ass'n Jr. XLIII, 270, 1940.

Fresh dislocations of the acromioclavicular joint are easily reduced, but the strappings and bandages used to maintain the reduction are usually ineffective. Applying the principle described in an earlier paper on fractures of the clavicle, the author's method is to reduce the dislocation of the acromioclavicular joint, and then pass one or two Kirschner wires through the acromion process across the acromioclavicular joint and into the other third of the clavicle. It was hoped that, if the joint was maintained in good position by these means, the ends of the ruptured ligaments would lie in apposition and would be in a position to unite and repair. Five cases of this type have been treated in this way with successful results in all. In most cases the wires were removed, as they necessarily passed through some fibers of the origin of the deltoid muscle, and consequently caused some discomfort on abduction of the shoulder. The patients were able to move the arms about quite freely immediately following the operation, and most of them returned to ordinary desk work within a few days without any other support. Two cases of recent wide dislocation with rupture of the coracoclavicular ligaments were treated with most satisfactory results. Roentgenograms taken later showed extensive calcification of the coracoclavicular ligaments, and gave strong confirmatory evidence that these ligaments had been torn and that they had become repaired. The attractive part of this method of fixation is the ease with which it can be carried out and its effectiveness. It supports the bones adequately and the patient has no discomfort. There is no deformity

when the ligaments have become repaired, and there is no disability later on. None of these dislocations has recurred so far.

"The Surgical Treatment of Flat Feet." Gerald L. Burke. The Canadian Med. Ass'n Jr. XLIII, 327, 1940.

The author has recently completed a detailed survey of the end results of 110 patients operated upon for flat feet at the Los Angeles Orthopaedic Hospital. In the majority of these patients Young's modification of Lowman's operation has been done. Young performs a plastic lengthening of the tendo achillis as a preliminary procedure. A drill hole and slot are made vertically through the scaphoid and the tendon of tibialis anterior is pulled posteriorly and placed through the slot into the drill hole. After the operation, long leg plaster casts are applied which are removed at the end of seven weeks.

The indications for operation are painful flat feet which have not improved under conservative treatment or which in the surgeons judgment are unlikely to improve under conservative treatment. The author believes that in general there is a fundamental objection to the fusion of any joint in the surgical treatment of flat feet. The results of operation have been satisfactory to both patients and surgeons in more than 90 per cent of the whole series.—Earl D. McBride.

INTERNAL MEDICINE

Edited by Hugh Jeter, M. D., F. A. C. P., A. S. C. P.
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"Malignant Melanoma Cells In the Bone Marrow." By John D. Battle, Jr., M.D., Cleveland, and Joseph Stasney, M.D., New Orleans. Archives of Pathology, May, 1941, Volume 31, Number 5, Page 631.

The authors have reported a case in which melanotic tumor cells were found in the bone marrow in connection with the study of bone marrow sternal puncture biopsy. Most of the tumor cells were oval or fusiform with a small rim of cytoplasm containing varying amounts of brown to black granules. The appearance of the metastatic tumor cells in the bone marrow smears is thought not to be entirely characteristic and for that reason most authors have expressed the belief that a definite diagnosis of tumor cells can be made only when the cells are arranged in syncytia. The tumor cells found in this case resembled the large variety in many respects. The presumptive diagnosis of malignant melanoma, on the basis of the bone marrow findings, was confirmed by post mortem.

"Studies on 'Stored Blood.'" By R. O. Muether and K. R. Andrews, St. Louis University School of Medicine, Department of Internal Medicine, Firmin Desloge Hospital. American Journal of Clinical Pathology, April, 1941, Volume 11, Number 4, Page 307.

The authors describe in this: (1) The Technic for Storage Blood; (2) Effect of Storage on Human Blood, and (3) The Effects of Stored Blood on the Recipient. These are practical reports and give useful data in connection with the recent advances in medicine as regards the use of blood banks, blood plasma and serum. The following summaries and conclusion give a good conception of the material brought out in the three separate articles.

The history of the storage of human blood is briefly related.

The various technics for the storage of blood were discussed and their relative values are considered.

The resistance of the stored erythrocytes to hypotonic solutions of saline is diminished as early as six hours after the blood is withdrawn from the donor.

This increased fragility of the erythrocytes appears in all types of preservatives used.

The mechanical fragility of the erythrocytes in the D.C.B. solution was normal after 40 days storage.

Potassium content of the plasma of stored blood increases at a gradual rate but never reaches dangerous proportions, even after 80-90 days storage.

Complement is well preserved in D.C.B. solution.

Aften 21-60 days, 60 per cent of prothrombin remained in eight of ten bloods studied.

Blood may be safely stored for 30 or 40 days if a suitable preserving fluid is used, and providing the stored blood is carefully watched for excess hemolysis.

UROLOGY

Edited by D. W. Branham, M. D.
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"Treatment Of Rupture Of the Kidney." Oswald S. Lowsley and Joseph H. Menning, Department of Urology, New York Hospital, N. Y. Journal of Urology, March, 1941.

Dr. Lowsley and Dr. Menning have written this article to condemn the policy of watchful waiting in instances of rupture of the kidney. They believe that where question exists as to the severity of the traumatism, exploratory operation and so-called ribbon-gut ligature with implantation of fat to the bleeding area should be performed. Their experience with such injuries has taught them that much less serious renal disability is liable if such operations are performed. Although they emphasize that the treatment of renal injuries is an individual clinical problem, they are inclined to perform exploratory surgery in those patients who show gross hematuria for more than 24 hours following injury.

Some experimental work on traumatized kidneys of dogs was done to support the clinical basis for such treatment.

COMMENT: What experience I have had with injuries to the kidney has been on the whole satisfactory, provided that massive hemorrhage with shock indicative of a pulpified lesion is not present. In the majority of instances, the ruptured kidney heals satisfactorily with a minimum of renal distortion and loss of function afterwards. I do not believe that there is sufficient clinical background for the teaching that an injury to the kidney is an acute surgical problem.

In the general discussion that followed I observed there was also disagreement with the essayist on this question of operative treatment of the bleeding kidney. The majority of those who shared in the discussion felt that conservative management was a safe course to follow.

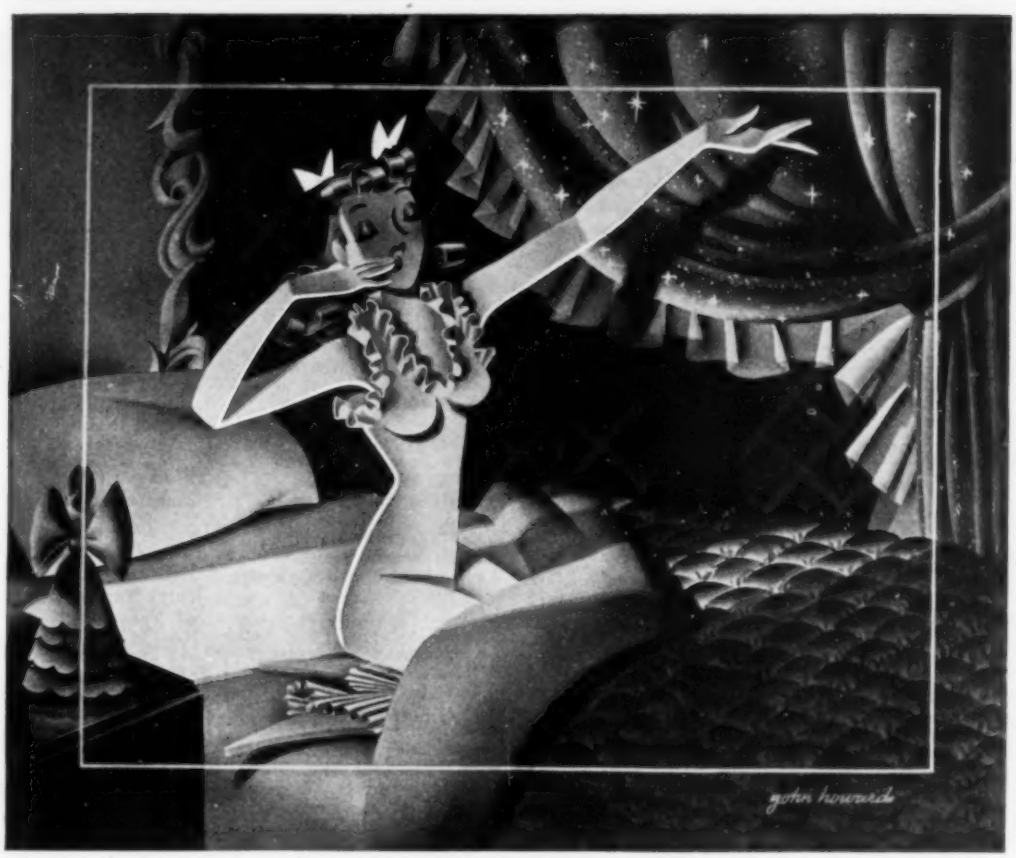
"Pyelonephritis Of Pregnancy." Dr. George C. Prather. Journal of Urology, February 1941.

An interesting presentation of a subject that should concern every general practitioner.

The author finds sulfanilamide the most effective drug for urinary tract sterilization in instances of pyelonephritis of pregnancy. He administers relatively large doses of the drug with no detrimental effects observed to either the mother or the fetus.

In a tabulation of cases of pyelonephritis as to the probability of recurrence of the disease in subsequent pregnancies, he found that the patient who had had an attack of pyelonephritis during one pregnancy had one chance out of two of having pyelitis again. However, if she had sterile urine at the beginning of the pregnancy, her chances of having the disease again was reduced to one out of six. Obviously efforts to sterilize the urinary tract before pregnancy occurred is necessary, if we are to reduce the incidence of pyelitis.

It was interesting to note that pyelitis of pregnancy and toxemia of pregnancy held nothing in common. In a study of a series of cases of pyelitis of pregnancy there was no increased incidence of toxemia of pregnancy. He therefrom concludes that pyelonephritis is not a cause of toxemia of pregnancy.



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• When "Habit Time" is neglected and the patient tends to become constipated, consider the use of Petrolagar as an aid to regular comfortable bowel movement. One to two tablespoonfuls daily (see directions on package) provide bland fluid to help soften the feces and bring about an easily passed, well-formed stool. As soon as a regular "Habit Time" has been re-established, the daily dosage of Petrolagar may be gradually diminished until treatment is no longer required.

Have you prescribed Petrolagar *recently?*

SAMPLES ARE AVAILABLE TO PHYSICIANS ON REQUEST

*Petrolagar—The trademark of Petrolagar Laboratories, Inc., brand emulsion of mineral oil . . . Liquid petrolatum 65 cc. emulsified with 0.4 gm. agar in a menstruum to make 100 cc.

Petrolagar Laboratories, Inc. • 8134 McCormick Boulevard • Chicago, Illinois

OFFICERS OF COUNTY SOCIETIES, 1941

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COUNTY	PRESIDENT	SECRETARY	MEETING TIME
Alfalfa	H. E. Houston, Cherokee	L. T. Lancaster, Cherokee	Last Tues. Each 2nd Mo.
Atoka-Coal	J. B. Clark, Coalgate	J. S. Fulton, Atoka	
Beckham	H. K. Speed, Sayre	T. W. Pratt, Cheyenne	Second Tues, eve.
Blaine	L. R. Kirby, Okeene	W. F. Griffin, Watonga	
Bryan	J. T. Colwick, Durant	W. K. Haynie, Durant	Second Tues, eve.
Caddo	E. W. Hawkins, Carnegie	G. E. Haslam, Anadarko	
Canadian	P. F. Herod, El Reno	A. L. Johnson, El Reno	Subject to call
Carter	R. C. Sullivan, Ardmore	H. A. Higgins, Ardmore	
Cherokee	P. H. Medearis, Tahlequah	Isadore Dyer, Tahlequah	
Choctaw	C. H. Hale, Boswell	Floyd L. Waters, Hugo	
Cleveland	D. G. Willard, Norman	Phil Haddock, Norman	Thursday nights
Comanche	G. G. Downing, Lawton	Donald Angus, Lawton	
Cotton	Mollie Scism, Walters	R. M. Van Matre, Walters	Third Friday
Craig	Powell L. Hays, Vinita	Paul G. Sanger, Vinita	
Creek	P. K. Lewis, Sapulpa	Wm. P. Longmire, Jr., Sapulpa	
Custer	C. Doler, Clinton	W. C. Tisdal, Clinton	Third Tuesday
Garfield	V. R. Hamble, Enid	John R. Walker, Enid	4th Thursday
Garvin	Robert M. Alexander, Paoli	John R. Callaway, Pauls Valley	Wed. before 3rd Thur.
Grady	Turner Bynum, Chickasha	Roy E. Emanuel, Chickasha	3rd Thursday
Grant	I. V. Hardy, Medford	E. E. Lawson, Medford	
Greer	J. B. Lansden, Granite	J. B. Hollis, Mangum	
Harmon	Samuel W. Hopkins, Hollis	Wm. M. Yeargan, Hollis	1st Wednesday
Haskell	Wm. S. Carson, Keota	N. K. Williams, McCurtain	
Hughes	William L. Taylor, Holdenville	Imogene Mayfield, Holdenville	First Friday
Jackson	Raymond H. Fox, Altus	Willard D. Holt, Altus	Last Monday
Jefferson	D. B. Collins, Waurika	J. I. Hollingsworth, Waurika	
Kay	J. G. Ghormley, Blackwell	L. I. Wright, Blackwell	3rd Thursday
Kingfisher	F. C. Lattimore, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	J. M. Bonham, Hobart	J. L. Adams, Hobart	
Le Flore	G. R. Booth, Le Flore	Rush L. Wright, Poteau	
Lincoln	J. W. Adams, Chandler	C. W. Robertson, Chandler	First Wednesday
Logan	Wm. C. Miller, Guthrie	J. L. LeHew, Jr., Guthrie	Last Tuesday evening
Marshall	John L. Holland, Madill	J. F. York, Madill	
Mayes	S. C. Rutherford, Locust Grove	E. H. Werling, Pryor	
McClain	B. W. Slover, Blanchard	R. L. Royster, Purcell	
McCurtain	R. D. Williams, Idabel	R. H. Sherrill, Broken Bow	4th Tues. eve.
McIntosh	D. E. Little, Eufaula	W. A. Tolleson, Eufaula	2nd Tuesday
Murray	P. V. Annadown, Sulphur	O. D. Thomas, Sulphur	
Muskogee	A. N. Earnest, Muskogee	S. D. Neely, Muskogee	1st & 3rd Monday
Noble	J. W. Francis, Perry	C. H. Cook, Perry	
Okfuskee	J. M. Pemberton, Okemah	L. J. Spickard, Okemah	2nd Monday
Oklahoma	George H. Garrison, Okla. City	W. W. Rucks, Jr., Okla. City	4th Tuesday
Okmulgee	I. W. Bollinger, Henryetta	M. D. Carnell, Okmulgee	2nd Monday
Osage	T. A. Ragan, Fairfax	George Hemphill, Pawhuska	2nd Monday
Ottawa	J. W. Craig, Miami	L. P. Hetherington, Miami	Last Thursday
Pawnee	M. L. Saddoris, Cleveland	Robert L. Browning, Pawnee	
Payne	A. B. Smith, Stillwater	Haskell Smith, Stillwater	3rd Thursday
Pittsburg	W. H. Kaeiser, McAlester	Edw. D. Greenberger, McAlester	3rd Friday
Pontotoc	E. M. Gullatt, Ada	R. E. Cowling, Ada	1st Wednesday
Pottawatomie	R. M. Anderson, Shawnee	Clinton Gallaher, Shawnee	1st & 3rd Saturday
Pushmataha	E. S. Patterson, Antlers	D. W. Connally, Antlers	
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	1st Monday
Seminole	Claude S. Chambers, Seminole	Mack I. Shanholtz, Wewoka	
Stephens	E. C. Lindley, Duncan	John K. Coker, Duncan	
Texas	L. G. Blackmer, Hooker	Johnny A. Blue, Guymon	Subject to call
Tillman	T. F. Spurgeon, Frederick	O. G. Bacon, Frederick	
Tulsa	J. C. Brogden, Tulsa	Roy L. Smith, Tulsa	2nd & 4th Mon. Eve.
Wagoner	H. K. Riddle, Coweta	S. R. Bates, Wagoner	
Washington-Nowata	S. A. Lang, Nowata	J. V. Athey, Bartlesville	2nd Wednesday
Washita	A. S. Neal, Cordell	James F. McMurry, Sentinel	
Woods	C. A. Royer, Alva	O. E. Templin, Alva	Last Wednesday
Woodward	Joe L. Duer, Woodward	C. W. Tedrowe, Woodward	